

ABSTRACT

Keith Parker, AN ANALYSIS OF THE PERCEPTIONS OF PARENTS AND EDUCATORS ON DARE COUNTY SCHOOLS' SPANISH DUAL LANGUAGE IMMERSION PROGRAM (Under the direction of Dr. Matthew Militello). Department of Educational Leadership, March 2019.

Bilingual education is an emerging trend that can be found in many American public schools. Increasingly, schools are looking towards dual language immersion programs to foster increased cultural awareness, stronger literacy skills, and innovative school transformation. The purpose of this study was to understand the perceptions of parents and educators in Dare County Schools on effective dual language immersion programs. The InQUIRY process was used in this study to understand the perspective of the participants. This process combines a sorting activity and follow-up focus groups to gather both qualitative and quantitative data. Five distinct perspectives emerged from the data collected in this study: *(1) Equity and Innovation, (2) Academic Achievement, (3) Social Awareness and Cognition, (4) Multiculturalism and Academic Achievement, (5) High-Quality Instructional Programs and Teacher Professional Development.* The study findings indicate that participants have a high preference for increased cultural awareness and literacy development; two characteristics that are often associated with highly effective dual language immersion programs. The implications of this research suggest the district will be well served to pair the integration of a robust global education curriculum with the dual language immersion program.

AN ANALYSIS OF THE PERCEPTIONS OF PARENTS AND EDUCATORS
ON DARE COUNTY SCHOOLS' SPANISH DUAL LANGUAGE IMMERSION PROGRAM

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by

Keith Parker

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DEDICATION

Dedicated with love to my parents, Chester and Brenda, for their inexhaustible support and neverending optimism.

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CHAPTER 1: INTRODUCTION

Background

It was a warm and sunny day in early August 2016 when I pulled into the parking lot of Martin Millennium Academy (MMA). Although I had visited the school before, this was my first time arriving as the principal. I walked down the sidewalk towards the front entrance, and the twenty-four waving flags, each representing a country around the world, captured my attention. Bilingual signs lined the hallways and visitors can see that even the bathroom signs are in both English and Spanish. The students at MMA receive a global education, and some parents choose to enroll their child in the school's Spanish Dual Language program.

During my time as principal of the school, I had the opportunity to witness the transformative results of bilingual education. Approximately, seventy percent of the students enrolled at MMA are eligible for free or reduced lunch, meaning they live in conditions associated with poverty. Historically, these students were marginalized by the public-school system, and as a result of high teacher turnover rates and systemic failures in school leadership, the quality of education they received was low. However, this trend has been reversed for the students at MMA. The dual language program began to significantly increase the educational outcomes for the students in the program. It became a game changer for our community.

When I walked into a dual language classroom for the first time, I was amazed. Jennifer Craddock is the Global Coordinator at MMA. She is responsible for organizing and overseeing the dual language program. Often, Jennifer and I would walk through dual language classrooms, either interacting with students or evaluating teachers. I remember distinctly one particular visit to a first-grade class. Ms. Martinez was teaching a holiday lesson, and the students were learning the lyrics to a Christmas song. Jennifer and I could hear the singing down the hallway, so we

decided to participate. As we walked into the classroom, the class greeter ran up to us and said, "Buenos días, como estas?" As we spoke with the young student, I asked in English, "What are you doing in class today?" Without even realizing it, the student began to answer in Spanish! When I asked him to translate his answer into English, he did so and said, "I'm sorry, I start speaking in Spanish without even realizing it!" This story might seem simplistic, but when given context, it demonstrates a compelling narrative. Here was a student from a low-income, socioeconomically disadvantaged background, and by first grade, he was able to engage in conversational Spanish. These experiences occurred daily while I was principal at MMA, and convinced me that bilingual education is a pathway to success for our students.

While I was the principal at MMA, I sought to learn as much as I could about Spanish-English two-way language immersion programs. In these programs, native speakers of both languages learn together in one classroom and ultimately become bilingual. The academic results are astounding. As Thomas and Collier (2012) point out, dual language classrooms provide students with more rigorous learning environments than in traditional classes and stimulate a higher degree of cognitive development. These classrooms become windows to the global world and students develop an awareness that promotes cross-cultural learning.

MMA is located in Edgecombe County, a rural school district in Eastern North Carolina. Like many other rural districts, the students in Edgecombe County face tremendous challenges stemming from lasting effects of generational poverty, classism, and systemic racism. It is difficult to reverse the trend of negative expectations, but it can be done. For us, dual language immersion was an innovative disruptor. When we launched the program, it immediately changed the status quo and began to level the playing field for disadvantaged students. Dual language

programs are known for their transformative effects in low performing schools. The programs can also be found in many high performing districts across the country.

In November 2017, I was presented with an opportunity to work for Dare County Schools to develop and implement a dual language program in all five elementary schools. Leaving the principalship and the work at MMA was the hardest decision I ever made. In my work in Dare County, I am supporting principals and teachers as the district investigates the possibility of implementing a dual language program.

The purpose of this study is to provide the Superintendent of Dare County Schools with an in-depth analysis of dual language programs and an exhaustive investigation of the interests and beliefs of teachers, students, and parents regarding the implementation of the program. Finally, the study will make recommendations for policy, practice and future research.

In this chapter I will:

1. provide a background and history of language immersion in the American education system,
2. expand and elaborate on the statement of problem and purpose of this study,
3. provide an overview of the methodology and list a definition of terms.

History of Bilingual Education in the United States

The history of bilingual education in the United States is complicated and has often been impacted by the social and political trends of the period. Carlos Ovando outlines the development of bilingual education in the public school system, and he shows that although the United States has always trended towards a belief in one national language, bilingualism is a vibrant part of the nation's history. Profoundly influenced by the English legal system, the founding fathers envisioned a universal language that would be used throughout the new country.

Fearful of factionalism and division, the founders believed that the young nation must develop its own unique culture. Despite their beliefs, the founders did not adopt an official national language and no such legislation currently exists (Ovando, 2003).

As Ovando (2003) points out, the absence of a national language policy has resulted in localized political, social and economic forces shaping the general perception of language diversity. As a result, language policy has often shifted based on the influence of historical events, and thus political symbols that represent immigrants has allowed some politicians to associate language diversity with special treatment for minority groups. Ovando outlines the evolving periods of language diversity as defined by Baker and Jones (1998). The permissive period of the 18th Century produced a fair amount of tolerance toward the many new languages that were represented in the American colonies. As many new waves of immigrants arrived to settle the harsh terrain of the wilderness, these groups held on to their ancestral language as a form of maintaining the culture of their homeland. However, following the ratification of the United States Constitution the colonies became unified as one nation. A national culture began to emerge, and many people supported the notion of a universal national language.

The restrictive period followed and as the turn of the 20th Century emerged, and millions of Eastern European immigrants began to arrive in the nation's cities, native-born Americans became increasingly anti-immigrant in their political associations. The result was legislative action that produced many policies and laws that promoted the teaching of English only in the public-school system. For example, the Naturalization Act of 1906 required immigrants wishing to obtain citizenship to learn to speak English. Similar state policies were enacted that required immigrant children to abandon their native language and learn English only in school.

Finally, the Opportunist Period followed the end of the second World War. As the United States became engulfed in a Cold War with the Soviet Union, it became clear that the nation's scientists, diplomats, and politicians needed to speak other languages to accomplish the political agenda of defeating communism. The National Defense Education Act promoted for the first time the teaching of foreign languages in school. Additionally, the progressive policies of the 1960's encouraged schools to honor the cultural and linguistic traditions of English Language Learners. It was becoming a civil rights issue to acknowledge the diversity of language. Title VII of the Elementary and Secondary Education Act that was passed in 1968 as a part of Lyndon Johnson's War on Poverty also appropriated federal funding for schools to use in the teaching of English Language Learners. After this point, bilingual education became a growing and popular trend within the American Education System. Schools began to embrace the diversity of language, and bilingual education has been used to promote cross-cultural homogeneity (Ovando, 2003).

The success of the Opportunist Period was jeopardized in the 1980s as a wave of conservatism dominated the national political scene. Ronald Reagan was elected in 1980 to a landslide victory over Jimmy Carter. Reagan's America first policies resonated with the nation's Evangelical community who believed that the criticisms of left-wing activists were overshadowing the great qualities of the country. The Reagan and subsequent Bush administrations took a decisively anti-bilingual position and worked to dismantle funding for language diversity programs. Reagan said in 1981, "It is absolutely wrong and against American concepts to have a bilingual education program that is now openly, admittedly dedicated to preserving their native language and never getting them adequate in English, so they can go out into the job market and participate" (Crawford, 1999, p. 53).

Additionally, the Reagan administration fought and won through several legal battles an increase in funding for English-only education programs. This resulted in decreased funding for bilingual education, and as such, the number of programs began to decline nationally. During this period, English-only advocacy groups began to emerge and promoted the melting pot ideology of immigration.

Although bilingual education continued to come under fire from critics, the late 1990s saw a resurgence of trust in language diversity programs when the Clinton administration forced the Republican-controlled Congress to rollback funding cuts for bilingual education programs. President Clinton was able to convince the Republicans to abandon a bill that would have significantly limited the amount of time given for English Language Learners to demonstrate proficiency in English tests (Ovando, 2003). Although bilingual programs still face criticism today, the success of bilingual education as a school turnaround and improvement strategy has renewed the credibility of the programs. As rural and underserved school districts seek creative ways to close the achievement gap, bilingual education has proven to serve the needs of both English Language Learners and native English speakers. Additionally, increasing global connectivity has produced an awareness of the need for language diversity. As a result, bilingual education is once again growing in popularity and ushering in a new period of optimism for supporters of language diversity programs.

Statement of Problem

In today's society, the ability to speak two languages is a valuable skill. The introduction of dual language programs in underserved schools can present marginalized students with new opportunities. If a student graduates from high school having mastered two languages, it can result in additional job opportunities and higher employment. Schools that implement dual

language programs open windows to the global world and students in these buildings are better equipped to live in a diverse society.

Now more than ever, our students must be taught the importance of diversity and tolerance. Dual language programs immerse the learner in dynamic experiences that promote cultural diversity. Students are exposed to global content and develop a multicultural perspective on a wide range of issues and topics. This type of education prepares students for work in an increasingly global world that will require frequent collaboration with diverse groups. Students must be ready for this, and they must learn the social skills necessary to become creative problem-solvers.

Although I served as a principal in Edgecombe County at a dual language school, the context of this study is in Dare County. In many ways, Dare County is different from Edgecombe County. The standard of living is much higher in Dare County. Traditionally, the schools in Dare County have been very successful on measurements such as standardized testing and high school graduation rates. Both counties are rural, but a noticeable difference is the geographic location of Dare. Dare is a coastal community, and seasonal tourism is the primary economic. Some families prosper from great economic prosperity, while others find their livelihood through jobs associated with vacation tourism. The schools are well funded through tax revenue that is generated from vacation tourism. Teachers are paid above the state average and turnover is low compared to other North Carolina school districts. According to the Public School Forum of North Carolina's 2017 Roadmap of Need, Dare County Schools ranks as the fourth highest performing school district in North Carolina.

Dare County Schools have historically seen high academic success. Many schools in the district offer a diverse array of academic and enrichment programs. However, the district has

lacked an overall strategic mission, and innovative instructional programs have not been implemented with consistency in all schools. Specifically, the lowest performing schools in the district, Manteo Elementary, and Nags Head Elementary have the highest Hispanic enrollments in the district. In the absence of a highly robust English learner program, these students have struggled to gain proficiency in English literacy assessments.

Additionally, some parents have expressed a desire to see more Hispanic culture integrated into these schools. Minority students have indicated a desire to see more culturally relevant teaching practices implemented in all classrooms. The introduction of a dual language program could address these parent and student concerns while simultaneously providing support to native Spanish speaking students. Notably, the opening of a 50/50 dual language program (a full analysis of the comparison between a 90/10 and 50/50 dual language program is provided in chapter 2) in Manteo Elementary and Nags Head Elementary could increase the language services currently offered to native Spanish speaking students.

Purpose of the Study

The purpose of this study is to gain an understanding of how current parents and educators in Dare County perceive the effectiveness of dual language programs. The data collected from this study will provide insights into the viability of a dual language program and assess the readiness of the schools and community for the program's implementation and continuous improvement.

The effectiveness of dual language programs and a specific analysis of program models will be outlined in the educational literature and covered more extensively in chapter 2. The research on dual language programs spans the past forty years with Thomas and Collier providing the vast majority of the body of research. Successful programs include rigorous

curriculums and extensive professional development for teachers. Dual language programs have been shown to produce impressive results in student academic performance. Q Methodology was used in this study as a means to gain insights from relevant stakeholders on the school and community perceptions of dual language programs. This study provides a thorough analysis of the perceptions of educators and parents on the effectiveness of dual language immersion programs.

Research Questions

The following research questions provided the framework for this study:

1. What are the critical factors and elements of dual language programs?
2. What are the perceptions of dual language programs by parents and educators in Dare County?
3. Why do parents and educators hold these viewpoints?

The Significance of the Study

This study is particularly relevant to the development of the district's five-year strategic plan. The impact of a dual language program is relevant to the district's commitment to allocate additional resources to fund innovative initiatives for underserved populations, such as the English Language Learners in the 50/50 dual language programs at Manteo and Nags Head Elementary schools. Additionally, dual language programs would support the district's initiative to prepare students for the twenty-first-century workforce.

The analysis of research trends and investigation of parent and educator perceptions of dual language programs makes this study relevant. Thomas and Collier have identified parent support as a critical indicator of student success in dual language programs (Thomas & Collier, 2012). Parents that actively engage and support their child's learning experiences early in

kindergarten and first grade, increase their child's bilingual literacy. This study will support district professionals as they work to increase parent engagement. Additionally, the district's curriculum leaders will be able to utilize the findings outlined in chapter 4 to implement a comprehensive professional development program for dual language teachers.

Overview of Methodology

To best quantify the perceptions of parents and educators in regards to effective dual language immersion programs, this study utilized a research technique known as Q Methodology. Participants were asked to engage in a sorting activity that required them to produce a visual representation of their views on dual language immersion. Q Methodology provided the researcher with the ability to sort qualitative data through a systematic and organized method. Q Methodology is a mixed-method approach. Quantitative data were collected from participant feedback, and groups were used to gather qualitative data.

Initially, a collection of statements was generated from the educational literature and research surrounding dual language programs and focus interviews with parents and educators. Then, a list of statements was created that highlighted the overarching themes that emerged from the literature and interviews. This list is referred to as the concourse. The concourse was then refined to formulate a selection of statements that best represented the viewpoints of the participants. This sample is referred to as the Q sample.

The participants for this study are referred to as the P sample and are composed of current parents and educators associated with Dare County Schools. These participants are directly or indirectly involved in the implementation of dual language programs in the district. Participants were asked to conduct a card sort of the Q sample statements as they responded to a single question inquiring towards their perception or interest in dual language programs.

A statistical factor analysis was applied to extrapolate data from the perceptions of parents and educators. Following the participant study, additional interviews and follow-up questions are presented to examine a thorough understanding of the perceptions of the participants.

Q Methodology presents the researcher with a powerful tool for analyzing and quantifying the perceptions of participants as it relates to the implementation of dual language programs in Dare County Schools. Another significant function of Q Methodology is that it recognizes the importance of input from the participant and recognizes their contribution at each stage of the research study (Militello, Janson, & Tonnissen, 2016).

Operational Definitions

Dual language immersion - Most accurately defined by Thomas and Collier, 2012, dual language immersion programs refer to classrooms where students learn in both their native and a target language. By becoming immersed in a target language at an early age, students can develop bilingual fluency, both academically and socially.

P Sample - Participants in this study who participated in the card sorting activity.

Q Sample - The list of statements that were generated from the P Sample activity.

Chapter Outline of the Dissertation

This dissertation is divided into five chapters. A brief overview of those chapters is provided below:

Chapter 1 provides an overview of the study and introduces the reader to the historical and relevant background of the topic. Readers are exposed to the context of dual language immersion as it relates to Dare County Schools. The researcher also provides a framework for his experience working in a dual language school.

Chapter 2 provides the reader with a thorough investigation of the academic and contemporary literature on dual language immersion in the United States. This chapter outlines the significant trends and theories of effective practices that result in high student achievement in dual language programs.

Chapter 3 provides a detailed description of Q Methodology, the primary analytic tool used in this study. Additionally, information is provided in the context of the research and the participants.

In chapter 4, the researcher provides an overview of the findings of this study.

Chapter 5 serves as the concluding chapter and presents the reader with a thorough analysis of the study. Further, this chapter provides recommendations for policy, practice and further research.

CHAPTER 2: REVIEW OF LITERATURE

Introduction

The purpose of this chapter is to investigate the literature associated with dual language immersion programs (see Figure 1). Dual language programs have grown dramatically in recent years, and bilingual education has become a national trend. Additionally, dual language programs have been shown to close the achievement gap dramatically. Students from all racial and linguistic backgrounds that enroll in these programs have been shown to outperform their peers in mainstream classrooms. The primary purpose of this study is to evaluate the perceptions of current Dare County Schools parents, educators and school leaders on the effectiveness of dual language programs. Therefore, it is essential to establish the credibility of successful dual language programs and to evaluate the prevailing trends in these programs. This literature review consists of the following sections:

1. Popular trends in bilingual education
2. Overview of dual language programs
3. Creative implementation bilingual program models
4. Social-cultural impact on minority students
5. Theoretical Framework

Popular Trends in Bilingual Education

Since the passage of the Elementary and Secondary Education Act in 1968, dual language programs have grown in popularity nationwide. Senator Ralph Yarborough introduced several amendments in 1967 that resulted in Title VII of the act, often referred to as the Bilingual Education Act (Paulston, 1977). The final version of the law provided funding for language programs promoting the teaching of Spanish as a native language and English as a second

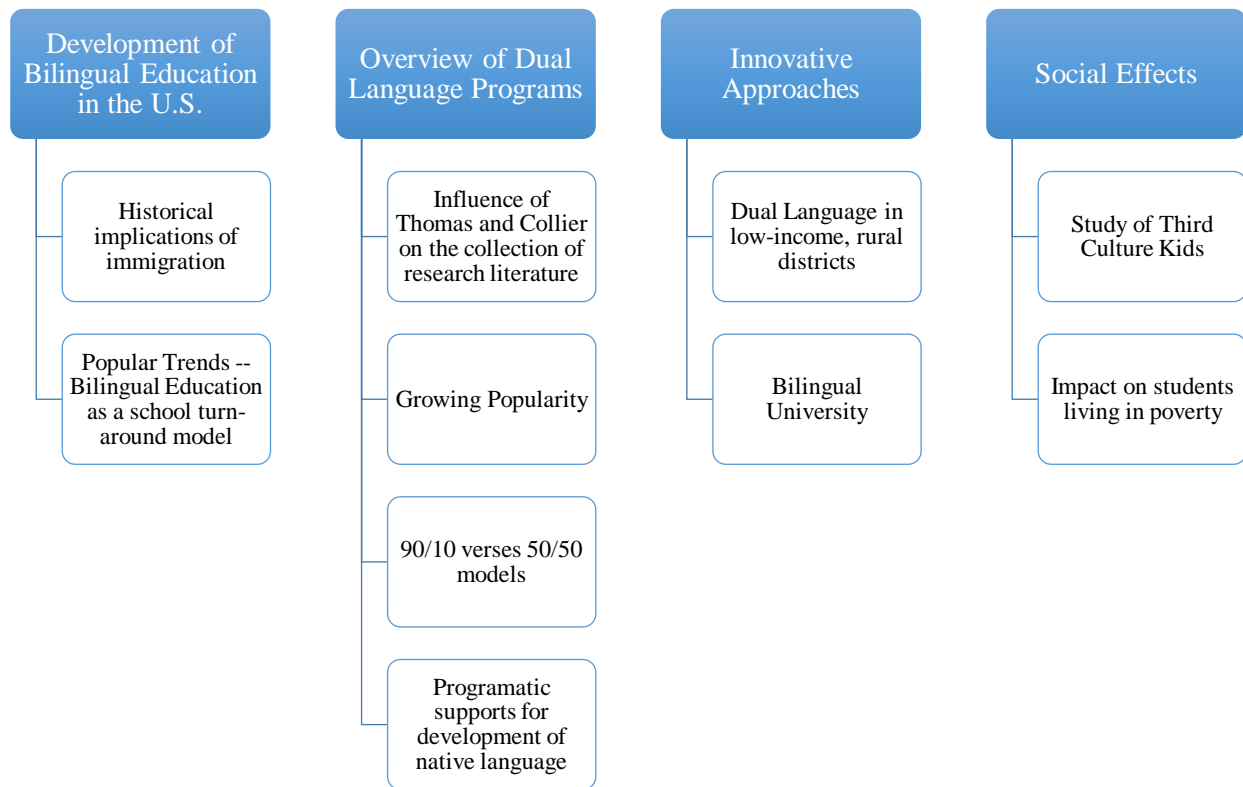


Figure 1. Literature bins.

language. This marked the formal introduction of bilingual education in American public schools. Since then, language programs have grown in popularity and can be found in school districts throughout the United States (Stewner-Manzanares, 1988).

The *Lau v. Nichols* (1974) decision further strengthened the inclusion of language programs in public schools. The Supreme Court ruled that public schools had not fully invested in language instruction for students with limited English proficiency. As a result, the court concluded that this was a violation of the Civil Rights Act of 1964. The case required schools to allocate funding to support the English development of non-native speakers. The ruling marked an important milestone in the history of bilingual education because it required schools to adequately fund language development programs (de Bruin, 1978).

Texas and Maine have gained national recognition for their outstanding language programs. Houston is the largest school district to participate in a research study by Thomas and Collier. As of the publication of the study in 2004, the district had an enrollment of over 210,000 students, 54% where Hispanic, 33% African-American, 10% Euro-American and 75% of the total student enrollment qualified for free or reduced lunch (Collier & Thomas, 2004). As of 2002, 56 dual-language programs were implemented in grades K-8 in Houston. These programs have shown positive results for student academic achievement. Students in these programs scored in the 60th to 76th percentile on achievement tests in grades 1-5. This was significantly higher than students from similar demographics attending similar schools without a dual-language program (Collier & Thomas, 2004). Similar results were found in the French heritage language program in Maine. In this case, students in the dual language program outperformed their peers by 20% over four years as measured by academic achievement tests (Collier & Thomas, 2004).

The positive trend outlined by Texas and Maine is consistent in North Carolina. North Carolina has recently embarked on a Global Schools Network that includes seventeen participating school systems that host international faculty and implement two-way dual language programs (Public Schools of North Carolina, 2014). Aside from the popularity of the programs with administrators, parents, teachers, and students, there are other reasons to appreciate dual language programs. For example, these programs have produced impressive results in closing the achievement gap between English Language Learners and native English speakers as it relates to language literacy. Additionally, it has been shown that students of all racial and ethnic backgrounds perform better academically in dual language immersion than their peers who participate in traditional programs (Thomas & Collier, 2012). Furthermore, dual language programs foster a sense of cultural diversity and community in the classroom and provide students with the skills to identify and understand unfamiliar cultural traditions.

Thomas and Collier have extensively researched dual language programs. Their research spans several decades and has examined a wide range of dual language issues relating to the development of the target language and the assimilation of the speaker into the cultural rituals of the target language. Thomas and Collier have spent the last decade researching the implications of dual language programs on the academic outcomes of students. Their research has highlighted the significant gains for students in certain states: Texas, New Mexico, California, and New York (Thomas & Collier, 2003). In these examples, dual language programs are providing an opportunity for students in disadvantaged school districts to experience rigorous and demanding learning environments. Often, rural and economically disadvantaged schools struggle to develop and sustain a highly rigorous and academically challenging curricular program. Schools in these contexts that have implemented a dual language program have been able to create innovative

instructional programs that have not traditionally been available to their students. The work of Thomas and Collier has produced an extensive collection of successful case studies of schools throughout the country and given credibility to the success of bilingual education in underserved, rural areas (Thomas & Collier, 2003).

Thomas and Collier (2003) have demonstrated the multiple benefits of dual language education. Effective programs include the following:

1. A minimum of six years of bilingual instruction;
2. A rigorous core academic curriculum;
3. Thematic language units in both languages;
4. Separation of the languages and no translation for learning purposes;
5. Use of the non-English language for at least 50% of the instructional time and up to 90% in early grades education;
6. Buy-in from school stakeholders;
7. Cultural relevancy between students, teachers, and parents;
8. High-quality teachers that are fluent in both languages; and
9. High-levels of community engagement.

Programs that emphasize these concepts have demonstrated high levels of academic success. The result is a learning environment that includes a rigorous curriculum and the ability of students to develop culturally diverse perspectives. Many parents appreciate the multicultural aspect of dual language programs. Moreover, parents often become advocates of the program and then work to solicit community support. In the context of rural districts, the support of the community is critical and can often be a defining factor in the success or failure of the program.

Through their work, Thomas and Collier have established the credibility of bilingual education and proven that structured dual language programs produce high academic achievement results. Additionally, the success of dual language programs can be traced to other factors that are often not academically related. For instance, in dual language classrooms, students often learn about many different cultures and in most cases, have a teacher that is from another country. Students are continuously interacting and learning in a cross-cultural community. This allows the teacher to foster a classroom community that is based on tolerance and inclusion of diverse opinions and ideas. In her research, cultural sociologist Angela Valenzuela explores the concept of *educacion*. In addition to the word's counterpart in English, *educacion* includes a broader approach to teaching towards people, not towards ideas (Valenzuela, 1997). Educators that embrace this concept, also embrace cultural relevancy in their lessons. Culturally relevant teaching is a distinguishing characteristic of highly effective dual language programs. Students develop a profound understanding of cultural connectivity. When educators make a strategic effort to teach this brand of humanism in bilingual classrooms, it often leads to increased student cultural understanding and appreciation for diversity and tolerance. From a cultural sociologists' perspective, Valenzuela's work has focused on the social effects of language programs and the resulting impacts on cross-cultural homogeneity. In many ways, students in dual language programs are developing a more intuitive cultural framework that allows them to interact in diverse and innovative environments.

Teaching students to appreciate cultural diversity can produce positive social results. As Freeman (1998) has pointed out, bilingual learners also gained an appreciation for the culture of the target language and therefore became more culturally tolerant. This work is particularly relevant given the divided nature of current national and global politics. The forces of

nationalism and identity-based politics seem to be gaining momentum in the political processes of many industrialized nations, the United States among them. Freeman has indicated that bilingual education could be a positive deterrent to this trend. By embracing other cultures and learning in complex environments, students in dual language programs gain unique and diverse learning experiences. These experiences often result in the development of a more culturally tolerant worldview. This can hopefully encourage students to contribute positively to social change.

Olsen and Jaramillo (1999) and Thomas and Collier (2012) found that when students develop bilingual fluency, it not only enriches their learning opportunities but creates a more positive outlook for their communities as well. Additionally, the benefits to our schools and society could be monumental if the broader educational community would embrace multiculturalism and bilingualism as mainstream education best-practices. Thomas and Collier (2012) have suggested that dual language programs not only provide enriched educational opportunities for the students that are enrolled in the program but provide a unique school reform model that many districts are beginning to implement. Moreover, as school transformation becomes an increasingly relevant educational topic, many districts are looking towards innovative approaches that will result in school turn-around but also subsequently prepare students to be competitive in the twenty-first century. Dual language programs have been shown to provide opportunities for both of these goals.

Sanchez (2014) has identified eight programmatic features of quality dual language programs:

1. Enriched and affirming learning environments
2. Empowering pedagogy

3. Challenging and relevant curriculum
4. High-quality instructional resources
5. Valid and comprehensive assessment
6. High-quality professional preparation and support
7. Powerful family and community engagement
8. Advocacy-oriented administrative and leadership systems

When administrators work to combine these characteristics in the implementation of dual language programs, the results are impressive. The combination of a rigorous and relevant curricular program with a vision of multiculturalism has yielded significant success stories from schools across the country. Sanchez (2014) suggests that bilingualism can create a foundation for twenty-first-century learning by connecting students with the larger world around them. When students learn in dual language programs, they are exposed to higher levels of culturally diverse content and therefore respond in more creative and diverse ways. Students in these programs also develop social and emotional skills at a higher rate than their counterparts in traditional programs. As a result, the benefits to dual language programs are not limited just to academic achievement but have also demonstrated positive cognitive and social development of the whole child (Sanchez, 2014).

Fred Genesee is another renowned researcher in the field of bilingual education. Like Thomas and Collier, Genesee has extensively studied the social and cultural effects of dual language programs on the lifelong learning outcomes for students. Genesee (1998) suggests that dual language programs contribute to a value-added education. In these programs, students develop increased cognitive skills, and even though they spend much of their day learning in the target language, their English skills develop at a higher rate than students in traditional programs.

Genesee (1998) references a case study of a French immersion program in Washington DC. In this program, the students spent their entire elementary career immersed in French. In addition to developing fluency in the target language, students also outperformed their peers in English proficiency although they had received little formal English instruction. Students in these programs develop a greater understanding of the general structure of language and are then able to replicate and modify language patterns between the native and target languages. Additionally, the bilingual brain often works twice as hard to translate symbols and imagery, therefore resulting in increased cognitive development in younger children (Genesee, 1998).

Overview of Dual Language Programs

Two-way dual language programs offer many educational benefits. These programs are distinctive in that they feature classrooms where students speak in native and target languages. In these programs, the instruction is delivered in the target language for both the purposes of literacy development and content acquisition. Two-way immersion programs that have experienced high academic achievement share two common goals: (1) a combination of oral and written proficiency in both languages that promote consistent use of bilingualism, and (2) academic achievement and the infusion of cultural diversity (Howard, Sugarman, Perdomo, & Adger, 2005). The makeup of the student demographics in these programs varies. Nonetheless, a consensus exists that a combination of native speaking students and students with some degree of fluency in the other language is ideal. The grouping of students is also essential to the success of the program.

In some cases, students spend the entire day together, and in other situations, they are divided for portions of the day for literacy instruction in either the native or target languages (Howard et al., 2005). The strategic importance of literacy instruction, especially in lower

grades, cannot be understated in two-way language programs. It is essential that students learn the conceptual framework of language and develop the skills to compartmentalize the grammatical tendencies of both the target and native languages. To help facilitate this learning process, school administrators of highly effective language programs intentionally group students during literacy instruction. Teachers often work with students in small groups and tailor instructional practices to meet the students' needs.

All two-way language programs require students to utilize both languages at separate times during the day. This is intended to strengthen the use of the target language and encourage students to develop bilingual fluency. In early grades when students are learning their first words in the target language, teachers use visual and symbolic strategies rather than translation. Students are required to think critically and to process the meaning of actions and symbols. This is more effective than traditional translation techniques that are often used in high school and college language courses. Thus, two-way immersion programs remain highly effective for students that enter the program at a young age (Howard et al., 2005).

One of the most critical aspects of two-way immersion programs is the choice of the program model. Two-way programs may opt for either a 50/50 or 90/10 model, referring to the percentage of instruction occurring in the target and native languages. Many districts have opted for the 50/50 model, and in these cases, a native and target language teacher are paired to work together. Students are grouped according to the preference of the teacher and rotate between the two teachers throughout the day, every other day, or one or two weeks at a time. In the 90/10 model, students spend most of their day immersed in the target language. The progression to a 50/50 model happens gradually, and by the time students exit elementary school they are spending half of their day learning in the target language. In cases where English is the general

native language, the 90/10 model can be useful in that it encourages a higher level of proficiency in the target language. Both models have been shown to produce higher levels of academic achievement in English, as compared to students in mainstream programs (Howard et al., 2005).

Tedick, Christian and Fortune (2011) provide a thoroughly detailed analysis of one-way immersion programs and dual language programs in the United States. Their research examines effective ways that immersion programs can meet the goals of the local needs of the program. Each context is different and includes various cultural and social complexities that require the adjustment of program structures. In each study, the researchers concluded that teacher development and preparation was essential to the success of the program. As noted in chapter 4 of their study, two-way immersion charter schools in the United States implemented successful programs during the early years of the immersion movement. In these cases, local context mattered significantly, and teacher development was also critical to the sustainability of the program (Tedick et al., 2011).

When compared to the research of Thomas and Collier that focused on 50/50 and 90/10 models, Gomez and Gomez have introduced a dual language enrichment model that provides subject area instruction in only one of the two languages (Gomez & Gomez, 1999). This model does not provide direct instruction in all subjects in the same language. Instead, it requires that some subjects are learned in the minority language and others in the majority. Gomez and Gomez suggest that the benefit of this model can be found in the increased vocabulary and literacy comprehension of learners (Gomez & Gomez, 1999). The consistency of learning the same subject in the same language may provide students with the opportunity to access a deeper understanding of main ideas and concepts.

The Gomez brothers are retired bilingual educators and have spent the past 20 years developing their enrichment model. According to their website, their program model is currently implemented in 127 school districts throughout ten states. They currently own and operate a consulting business that offers training and services to districts that are exploring dual language. Their enrichment model has gained popularity and offers an alternative to the full language immersion.

Critics of the Gomez and Gomez model suggest that students do not develop bilingual fluency at the same rate as full immersion students. Nickerson (2015) studied a cohort of students for five years that were instructed in the Gomez and Gomez model (Nickerson et al., 2015). Nickerson found that after five years of language instruction, the students were generally not bilingual. Teacher perception data, however, indicated support from school leadership and generally a favorable perception of the model (Nickerson et al., 2015).

Teacher development is vital to the overall quality of dual language programs. Highly qualified teachers play an essential role in the implementation of the program. Cummins (2012) posited that effective dual language teachers are continually engaging in professional development opportunities and they work collaboratively to build strong cultural relationships with their students. According to Cummins, effective practices for dual language teachers include building strong relationships based on the prior experiences of the students and using those experiences to create a welcoming classroom community. Especially in 90:10 programs, classrooms will often have a mixture of students in the target and native language. Creating a positive classroom culture built on the appreciation of diversity and tolerance is critical to the success of dual language programs.

Cummings also found that when teachers use instructional strategies that promote a sense of classroom community, academic scores increase. For example, when teachers maintain constant communication with families through newsletters, phone calls, and home visits, it increases the buy-in and support from the family. The goal is to make the classroom feel like an extension of the home. When teachers embrace these community-building strategies, it makes the classroom feel more like the student's home (Cummins, 2012). Teachers can encourage this type of collaboration with families by providing communication in both the target and native languages. In the case of 90:10 models, some families may only speak in the target language and communication exclusively in English could be a barrier to their participation in school events. Also, creating multi-language school literature can further promote a culture of bilingualism.

In addition to building strong classroom communities, effective dual language teachers promote effective classroom instructional strategies that result in the development of oral and written language. It is essential for the teacher to be a good model of oral language proficiency and to speak to students using proper and academic vocabulary (Cummins, 2012).

Christian (1992) studied the implementation of immersion programs that were implemented in the late 1980s. These programs were implemented in schools that became early adopters for the two-way immersion model. In the study, Christian examined thirty programs throughout the United States. The inclusion of language minority and language majority students into the same classroom is essential to the success of two-way immersion programs. It is also essential to balance the demographics of the class between the two groups of students. Christian concluded that typical goals for two-way immersion programs consist of: (1) students will develop high levels of proficiency in their first language and a second language, (2) students will demonstrate mastery of the language through performance assessments, and (3) students will

develop a cross-cultural competency with the goal of becoming culturally aware. Two-way programs also provide additional benefits to language minority students by allowing them to develop native language skills while simultaneously learning English (Christian, 1992).

Moreover, English speaking students benefit because they learn a second language while also strengthening their understanding of the English language. For both groups of students, language development occurs while learning content. This is a unique feature of early childhood dual language programs as opposed to secondary foreign language courses in high school or college. The acquisition of content while learning a second language has demonstrated significant academic gains for children in two-way programs (Christian, 1992). Additionally, students develop, at a young age, enhanced social and cultural perspectives, that increase their understanding and tolerance of cultural diversity.

Parents that are interested in enrolling their child in a dual language program often ask which program model is the best, 50/50 or 90/10. The answer depends on the circumstance and context of the learner. Ferlazzo (2018) argues that the 90/10 model produces a higher degree of bilingualism among native English students. However, a two-way immersion program that utilizes the 50/50 model is best suited for both native English speakers and English Language Learners (ELL). Lindholm-Leary (2007) has suggested that increasing the amount of English instruction for ELL's does not necessarily lead to an increase in English proficiency. Students that spend more time during the instructional day in Spanish do perform with higher achievement in Spanish, therefore, resulting in higher levels of bilingualism. Also, students that are more bilingual, generally, perform better in both Spanish and English. This research suggests that the 90/10 model presents some advantages over the 50/50 when compared to increased bilingual fluency.

However, several factors must be considered when determining the appropriate program model. Although the 90/10 model has some advantages, the impact of standardized testing often influences administrators to direct teachers to use ineffective pedagogical practices. For example, by third grade, a native English student in a 90/10 model may not outperform his or her peers in a traditional English classroom. In some cases, students do not develop bilingual fluency until fifth grade or middle school. This creates challenges for school districts because of the demands of third-grade reading accountability tests. School leaders are often persuaded to encourage teachers to incorporate more English instruction, therefore, decreasing the preferred amount of instruction in the target language.

Successes and Challenges of Dual Language Programs in the United States

Lindholm-Leary (2012) focused on the successes and challenges of dual language programs in the United States in the vast majority of her research. The primary focus of the 2012 study was to examine the successes and challenges of promoting bilingual literacy in 90:10 and 50:50 models. In the 90:10 model, all reading, and literacy instruction begin in the partner language, and English is only used to reinforce oral language proficiency and pre-literacy skills. The percentage of instructional time that is devoted to English language fluency transitions to the 50:50 model by fifth or sixth grade. In the 50:50 model, students spend half of the instructional day learning in English and the other half in Spanish. This continues through fifth grade. In some of the schools that Lindholm-Leary studied, students learned to read in their primary language first and then developed literacy skills in the partner language around second or third grade. This feature is unique to the 50:50 model whereas in the 90:10 model students almost entirely learn to read in the partner language first (Lindholm-Leary, 2012).

Lindholm-Leary's study also highlighted the challenges associated with program design in dual language programs. A significant issue that can impact the program design is the expectation of administrators that English language proficiency for immersion students must progress at the same rate as traditional students by second or third grade. This is often not the case in 90:10 models, where native English-speaking students become literate in the target language and then in English. Because of the influence of standardized testing, school administrators may be inclined to modify the program structure to include more time where students learn in English. As Lindholm-Leary points out, more instructional time in English does not always translate into higher English proficiency. A focus must be given to the instructional strategies that are being used to teach students the foundations of language structure. The pressure to increase English proficiency early on is intensified by accountability measures of many state and local education agencies.

Finally, Lindholm-Leary (2012) highlights the lack of research into the development of oral academic language proficiency in dual language programs. As students begin to develop a fluency in the target language, it is often difficult for school administrators and researchers to determine the full extent of the academic language that is used in the classroom. Most administrators have, at most, a minimal fluency in the target language and during classroom observations, it can seem that students are engaged in academic conversation in the target language when they may not be at all. It is crucial for teachers to incorporate academic language into the lessons beginning in kindergarten. Students must develop and maintain appropriate grade-level academic vocabulary in both languages.

Lindholm-Leary's exhaustive research in the field of dual language has produced significant findings. Notably, her research has proven that when dual language programs are

structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly. In her 2001 book, *Dual Language Education*, she highlights the success of programs that integrate cultural awareness and highly involve parents. One significant finding was that parents who took their children to 2-3 cultural events at the school per year, 75% of their children developed high levels of bilingual fluency as compared to only 30% of the children that attend 0-1 events (Lindholm-Leary, 2001). This demonstrates the importance of parent involvement but also the need of the school to foster cultural awareness in addition to language development. As Lindholm-Leary has demonstrated, a central purpose of the dual language movement has been to expose students to cultural experiences that can help create a meaningful cross-cultural experience. Often, parents do not enroll their child in a dual language program just so that the child can learn a second language. The ability for their children to learn about other cultures is a significant decision-making factor for parents.

Section Summary

Dual Language programs present many benefits to the students that enroll in the programs. The school and community context are essential in determining the programmatic design, i.e., 90/10 or 50/50 models. 50/50 models are effective when schools have a high population of ESL students, and 90/10 models are best suited for classrooms where the majority of the students are native English speakers.

Involving parents and community partners in the development phase of implementing a dual language program is critical to the success of the program. Dual language programs, aside from the cognitive benefits that they produce, are highly suited to promote cultural homogeneity and classrooms often become the cultural centers of the school.

Some significant challenges are often presented to schools that implement dual language programs. One challenge is ensuring that native speaking administrators and school officials invest the needed time for their professional development. Often administrators make decisions without fully understanding the long-term design of the program. Continued professional development for both administrators and educators is a critical component of highly-effective programs.

Creative Implementation of Bilingual Program Models

The impact of globalization on the economic development of rural regions has been often produced negative results. In the case of Eastern North Carolina, the loss of industrial and farming jobs has adversely affected the public-school system. The loss of jobs has resulted in a decrease in local funding for schools, and the quality of education has suffered. In 1994, five school districts sued the state of North Carolina charging that the legislature had underfunded rural districts in such an adverse way that it was currently impossible to provide a quality education for all children in these districts. Judge Manning ruled in favor of the districts and affirmed that according to the North Carolina Constitution, every child in the state is entitled to a “sound, basic education” (Stancil, 2017).

One significant challenge for rural districts in Eastern North Carolina is the disproportionate gap between the success of white students as compared to black students. Black students continue to underperform their white peers at alarming levels in the district. In the case of Edgecombe County for the 2012-2013 school year, there was almost a 30-point difference between the percentage of the white students who passed the third-grade reading test as compared to black students. In addition to performing below grade level at a rate higher than their white peers, black students in Edgecombe also receive higher disciplinary consequences.

During the 2015-2016 school year, 78% of the office discipline referrals (ODR's) were written on black children as compared to 15% written on white children. In that same school year, black students comprised 57% of the total school enrollment and white students comprised 29% of the enrollment (Morris, 2017). Moreover, Edgecombe is no exception to the national trend. Nationally, students of color continue to underperform their white counterparts academically.

The Public School Forum of North Carolina recently released their annual report on the condition of education in all North Carolina counties. The report found that rural counties in Eastern North Carolina experience the greatest challenge of resource allocation, human capital retention, and academic proficiency as compared to counties in central and western North Carolina. The report provides a detailed examination of the economic and regional influences that impact the quality of education in North Carolina's public schools. Many regional and school leaders are embracing school turn-around models and exploring creative strategies to close the achievement gap, despite the region-specific challenges that rural schools confront.

As a federally and nationally recognized school transformation model, dual-language programs have proven to address many of the challenges faced by Title I districts. Additionally, dual language programs have been proven to reduce the achievement gap between black and white students significantly. Students in Title I schools that are enrolled in dual language programs often outperform their peers that are enrolled in traditional programs. Additionally, these students also tend to outperform the North Carolina average for reading and math scores on End-of-Grade tests (Collier & Thomas, 2012). Thomas and Collier have also noted that the longer students stay in a dual language program, generally, the higher their academic outcome.

According to the North Carolina Department of Public Instruction, and a collaboration with Thomas and Collier, 2012, dual language programs have proven to address the following major challenges of Title 1 schools in North Carolina (Public Schools of North Carolina, 2004):

1. Focus on Effective Instructional Strategies: Dual language programs increase the rigor of classroom instructional practices through the following methods: teaching language through academic content, incorporating a balanced literacy approach in English/Spanish Language Arts, engagement lessons through student discovery, and increase rigor through higher-level cognitive activities.
2. Innovative Instructional Strategies: Thomas and Collier found that in all of the North Carolina schools that were surveyed for this 2004 study, all of the dual language programs incorporated innovative instructional practices that engaged students in both the native and target languages. Additionally, over half of all language skills are transferable to all languages. Therefore, teachers in dual language programs can generalize most skills and students learn to transfer what they learn to the other language naturally.
3. Professional Development: Generally, dual language programs require a more thorough and complex professional development model for teachers in the program.
4. Parent Involvement: Because dual language programs promote cross-cultural awareness, schools often provide cultural events and parent involvement nights to engage parents. Because the dual language program can often seem nebulous to parents, generally they are more engaged in school-sponsored events because they seek to understand the program entirely.

Indeed, dual language programs are not the ultimate solution to school transformation for rural schools. Research from the New Leaders for New Schools project has shown that the ability of the principal to lead turnaround efforts in Title I schools is extraordinary (Desravines, Fenton, & Aquino, 2016). Although dual language programs have produced considerable results, they should not be considered as a single solution to the challenges of Title I schools. However, in conjunction with highly qualified and effective school leaders and teachers, dual language programs can result in significant increases in student achievement. As Thomas and Collier have demonstrated in their recent work for the North Carolina Department of Instruction, dual language programs are effective school turnaround models (Public Schools of North Carolina, 2004).

Esposito and Baker-Ward (2013) found that both dual language and immersion programs in Greene County resulted in higher academic achievement for language native and language minority students in the district's Spanish dual language program. Esposito and Baker-Ward investigated the influence of dual language on the development of executive function from the students enrolled in the program. They define executive function as the ability to use cognitive resources as aided by successful experiences in school. They also found that an ethnically diverse, low-income sample of 120 students in a dual language (50:50) program performed better on a cognitive test than did their peers. The study implies that the benefits of a dual language program can be contextualized in other, non-immersion, programs in elementary school. The research further demonstrates that dual language programs have a direct and positive impact on a student's ability to rationalize and contextualize complex cognitive functions. The authors also frame the context of this study by highlighting the transformative implications that dual language programs present to low-income and traditionally underserved school districts. Esposito and

Baker-Ward cite several studies that suggest low-income children are at a higher risk of developing executive function than are their more advantaged peers (Gottfried, Gottfried, Bathurst, Guerin, & Parramore, 2003). Language programs that promote the development of executive function enable disadvantaged learners to develop skills that can lead to higher paying jobs and greater success in the workforce (Blair & Diamond, 2008).

The University of Texas Rio Grande Valley (UTRGV) is positioned to become the nation's first bilingual university, and its program model is particularly compelling. Francisco Guajardo (Trinidad, Guajardo, Kranz, & Guajardo 2017) is the executive director of an emerging program at UTRGV called the B3 Institute. The programs primary principles are: bilingual, bicultural, and illiterate. This initiative has the potential to transform UTRGV and could serve a model for other universities across the country. The majority of students enrolled in the university speak both English and Spanish. Many of the students are native Spanish speakers and have experiences of having their native language repressed at some point in their educational career. The B3 Institute seeks to reverse this trend in the Valley and through this model students will earn their degree by taking courses taught in both Spanish and English. The work of Guajardo and others in the institute is aimed at promoting social change in the Valley. By exposing students to bilingual content, Guajardo believes that the university will be preparing them to be competitive in the economy of the border states (Tyx, 2017). After traveling to the University of Ottawa in 2015, Guajardo is relying on their 150-year tradition as a bilingual model. If UTRGV can successfully integrate bilingual courses into all of their graduate programs, the university is well positioned to spur social change in the Valley and also provide a bilingual model for other universities throughout the country.

Social-Cultural Impact on Minority Students

Aside from the cross-cultural and linguistic benefits, dual language programs have been shown to close the achievement gap between black and white students. Moreover, as an effective school turnaround model, dual language programs have become very popular with schools that have historically faced social and economic challenges. The work of Thomas and Collier (2012), Genesee (1998), and Sanchez (2014) have shown the academic and social advantages of the program for all learners, especially students of color. This research study seeks to understand the experiences of students of color as they travel through dual language programs. Notably, a focus is given to students who are from multi-cultural homes already. A research topic in this study is to explore the influence of a multi-cultural classroom on students who already have a multi-cultural heritage. What are some of the benefits and challenges that these students face as they seek to integrate themselves into dual immersion?

Pollock and Reken (1999) are experts on a group of students they coined “third culture kids” (TCK’s). Their pioneering book, published over a decade ago, details the experiences of kids who have lived abroad on military bases, missionaries or traveling along while their parents conduct international business. Pollock and Reken bring a wealth of credibility to this topic as they have spent much of their careers advising parents from multi-cultural backgrounds. They define a TCK as someone who has spent a significant portion of their developmental years in a place or region that is different from their parent’s culture. Their work explores the implications of having a so-called third culture. As one could imagine, TCK’s have benefited from an increased understanding of the world and a broader cultural perspective. In this regard, TCK’s have an advantage in dual language programs in the sense that they have already experienced multiple layers of cross-culturalism. TCK’s have unique experiences that help them appreciate

the complexities of cross-culturalism. These experiences can result in TCK's having increased confidence in multi-cultural environments. If you spent your childhood immersed in a culture that was distinctly different from your own, then you should theoretically be well-equipped to learn in a similar classroom environment. Adaptability is a valuable characteristic to possess to be successful in a dual language classroom. Students are often required to learn through innovative approaches that may be different from those used in traditional classrooms. Students that can maintain constant functionality in these environments are well-suited to succeed in a dual language program, and TCK's tend to possess the characteristics.

However, as Pollock and Reken (1999) point out, TCK's can often experience a sense of rootlessness and grief regarding their cultural belonging. In some cases, students can feel as if they have "no place in the world." For dual language teachers to fully engage students in a multi-cultural classroom, the experiences of TCK's must be considered. As some students bring little to no cross-cultural experience to the classroom, others bring vastly diverse experience, and this too can present some challenges for creating a high-function classroom community.

Theoretical Framework

The research in this study was formulated out of Cummings' (1973) cognitive development hypothesis in which he formulates that bilingual education has a positive effect on the cognitive development of young children. According to Cummings, the bilingual experience is different from the unilingual because the former acquire two sets of language codes. Having to switch between codes produces an increase in cognitive function, therefore allowing the learning to think critically and apply logic to complicated situations. In this study, Cummings also attempted to refute the work of Macnamara's (1970) theoretical analysis of bilingualism and thought. Macnamara essentially argued that there is no additional cognitive development

resulting from bilingual education. He suggested that there is no noticeable difference between the linguistic, cognitive functions of bilinguals and unilingual. His work was a major criticism of bilingual language programs. Cummings attempted to disprove this criticism by formulating a theoretical hypothesis that immersion in bilingual learning results in higher cognitive functions that translate into linguistic and non-linguistic activities. Since Cummings formulated his hypothesis in the early 1970s, it has been used as the basis of many research studies that have proven the connection between increased cognitive ability and bilingual language programs. Additionally, Cummings' hypothesis is the foundation for this study as well.

Chapter Summary

This chapter was an overview of the essential literature that relates to the problem of practice. The chapter began with a discussion of the work from the leaders in the field of dual language education. Thomas and Collier essentially wrote the book on dual language education and their work paved the way for other studies that have explored the unique environments of bilingual classrooms. The popularity of dual language programs nationally, especially as school turnaround models was then explored in greater detail. An analysis of Howard et al. (2005) provided an overview of the primary dual language models, 90:10 and 50:50. Their work also examined the structural supports that make dual language programs successful, such as teacher professional development and programmatic structures. This section concluded with an analysis of Lindholm-Leary's work that has examined the role of cross-cultural connections in the dual language classroom.

Thomas and Collier have conducted a broad range of research studies on two-way immersion programs like the 90/10 and 50/50 models. An investigation was presented into the Gomez and Gomez model, which unlike the 90/10 and 50/50 models promotes that subject-

specific content should be taught in either the minority or majority language for the duration of language cohort. While this model presents an alternative to the programs that are highlighted in Thomas and Collier's work, it has undergone criticism for not producing high levels of bilingualism.

The chapter then focused on dual language programs in rural Title I districts. The work of Thomas and Collier was once again reviewed in conjunction with the research conducted by the North Carolina Department of Public Instruction on the growing number of dual language programs in the state. In this section, the literature analysis focused on effective turnaround strategies used by Title I schools that also implement dual language programs. Additionally, the focus was given to the first bilingual university, UTRGV. The creation of a bilingual language program at a major American university is a turning point for the bilingual education movement, and this further emphasizes the value that speaking multiple languages can have on one's career and life goals.

Finally, the chapter concluded with a look at TCKs and the impact of dual language programs on students that come from culturally diverse background. TCKs are unique in the sense that they have experienced cultural diversity other than the primary culture of their parents. Often, TCKs have lived in areas outside of the United States or have parents that are from multi-cultural backgrounds. While dual language programs benefit these students, further research should be conducted on the cultural implications of teaching these students a language that is different from the one spoken in the home. In these cases, bilingualism introduces yet another cultural distinction, and the long-term implications are not fully known as it relates to these students being able to develop a sense of belonging and place.

CHAPTER 3: METHODOLOGY

Introduction

The purpose of this study was to evaluate the perceptions of current Dare County Schools parents, educators and school leaders on the effectiveness of dual language programs and to identify if such a program would benefit the academic achievement of students in Dare County. Table 1 explains how the research questions connect to the data collection process.

This study is a dissertation in practice (DIP) and follows the format suggested by the Carnegie Project on the Education Doctorate, known as the CPED model. In the context of this DIP, the researcher has identified the complex problem of creating systems that produce educational equity throughout all schools in a rural public school district in Eastern North Carolina. Because educational equity issues often stem from racial and economic barriers, this study investigates the ability of dual language programs to level the playing field for all students and provide additional opportunities for teachers to raise student achievement.

The perceptions of the relevant stakeholders are essential to the long-term success of the program. This study utilized InQuiry as the primary research methodology. Developed by Militello et al. (2016), InQuiry is an adaptation of Q Methodology in which an additional step of gathering focus group data is collected. In this process, the focus group gives the interviewer the opportunity to gain further insights into the perceptions of the participants. The focus group interview also facilitates a more reflective process and allows for the interviewer and the participant to engage in additional dialogue.

William Stephenson developed Q Methodology in 1935 as a means to quantify the perceptions of participants in research studies. In this study, the term Q Methodology applies broadly to the research methodology and InQuiry refers specifically to the focus group

Table 1

Research Questions and Data Collection

Research Question	Data Collection	Timeline
What are the essential elements of a dual language immersion program?	Detailed Literature Review and Q Statement developed.	2014 – present
What are the perceptions of dual language programs by parents and educators in Dare County?	Q Sort Post sort questionnaire	June – July 2018
Why do these parents and educators hold these viewpoints?	Focus group interviews with a sample from each factor.	August – September 2018

interviews. This study utilized a mixed methods approach. Quantitative data was collected from participant feedback, and focus groups were used to gather qualitative data. This data supported the development of the study's research questions that were intended to identify the needs of the community and the schools. This study provides recommendations for policy, practice, and research.

Additionally, this chapter examines a detailed explanation of Q Methodology and why it is best suited for studies like this one. A table of Q statements has been included in this chapter to illustrate the primary indicators for data collection. The researcher was interested in the perceptions of the parents and educators as it relates to the areas of improvement in the schools. When learning about dual language, the stakeholders identified several areas of the program that would directly benefit their school. The InQUIRY process was used to analyze the beliefs, attitudes, and perceptions of the participants of this study. Finally, this chapter explains how the research questions and participant feedback align with the data collection methods.

A Rationale for the Research Approach

As noted in the research questions listed in Table 1, this study sought to understand the perceptions of parents and educators as it relates to effective practices in dual language programs. To best understand these type of responses, it was essential to identify a research methodology that was suited to analyze participant perceptions. Q Methodology is an effective method because it can be used to quantify and express the viewpoints of marginalized stakeholders. In the case of this study, a significant percentage of the participants are parents in a marginalized community. Q Methodology is a powerful tool for analyzing and quantifying the values, beliefs, and perceptions of participants as it relates to the topic of this study. Another significant function of Q Methodology is that it recognizes the importance of input from the

participant and recognizes their contribution at each stage of the research study (Militello et al., 2016).

When analyzing the subjectivity of participants, there is no single evaluation tool that offers the researcher a perfect way of validating the data. However, Q Methodology is particularly appealing to sort the data in this study because of (1) its ability to consider culturally relevant perspectives, (2) solicit input from marginalized stakeholders, and (3) sift through the subjectivity of the participant by having him/her sort the Q Statements based on their belief structures.

The Q sort technique is an essential feature of Q Methodology and is the basis for the data organization. In this process, the participant organizes a set of statements by ranking them based on their individual beliefs or perceptions. A comprehensive review of the literature produced a thorough list of statements used in the sort. In this study, the Q statements were identified by categorically analyzing bins from the literature review and input gathered from parents and educators interested in learning more about a dual language program.

Phase I: The Concourse Theory and Development of the Q Statements

The creation and organization of a set of statements related to the research questions, then followed by a sorting activity of voluntary participants, is the foundation of Q Methodology (Militello et al., 2016). These set of statements refer to the concourse. Once the concourse was created, the statements were revised and edited to create a final list known as the Q sample. The Q sample directly relates to the guiding research questions. As Militello et al. (2016) point out, “The primary purpose of the concourse is to create a large set of statements that broadly represent different opinions of the group to be studied” (p. 93). Table 2 represents the Q sample statements.

Table 2

Highly Effective Elements of Dual Language Immersion Programs Q-Sample Statements

No.	Statement	Selected Sources	Category
1	Students in dual language programs often outperform their traditional peers in reading and math assessments.	Collier & Thomas, 2004	Academic Success
2	When school administrators cultivate dual language program rigor with a vision of multiculturalism, the result is increased achievement and success for students.	Sanchez, 2014	Academic Success
3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.	Lindholm-Leary, 2012	Academic Success
4	The longer students stay in a dual language program, generally, the higher their academic outcome.	Thomas & Collier, 2012	Academic Success
5	Dual language programs result in higher levels of student engagement.	School Leader	Academic Success
6	Language immersion students perform higher on standardized tests than their peers in traditional programs.	Dual Language Program Coordinator	Academic Success
7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.	School leader	Career Opportunities
8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.	Dual Language Program Coordinator	Career Opportunities

Table 2 (continued)

No.	Statement	Selected Sources	Category
8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.	Dual Language Program Coordinator	Career Opportunities
9	Students in dual language programs engage in activities that promote high cognitive development.	Genessee & Cloud, 1998	Cognitive Development
10	Dual language programs produce higher executive functioning skills in young learners.	Esposito & Baker-Ward, 2013	Cognitive Development
11	As students become fluent in two languages, it increases their cognitive brain development.	School Leader	Cognitive Development
12	In dual language programs, students learn to use different parts of their brain simultaneously.	School Leader	Cognitive Development
13	Language immersion students typically have greater self-confidence and can articulate their thoughts and opinions in a more effective manner than their traditional peers.	Dual Language Program Coordinator	Cognitive Development
14	Dual language programs increase the fluency of the learner's native language.	Teacher in a Dual Language Program	Language Development
15	Students in dual language programs learn the conventions and foundations of language at an early age, and this results in greater levels of fluency in both languages.	School Leader	Language Development
16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.	Thomas & Collier, 2003	Multiculturalism

Table 2 (continued)

No.	Statement	Selected Sources	Category
16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.	Thomas & Collier, 2003	Multiculturalism
17	Dual language classrooms promote <i>educacion</i> , the concept of embracing cultural relevancy while teaching content. <i>Educacion</i> promotes tolerance and culture understanding in the dual language classroom.	Valenzuela, 1997	Multiculturalism
18	Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to increase academic learning.	Freeman, 1998	Multiculturalism
19	Third culture kids perform well in dual language programs because they already have a multicultural background.	Pollock & Van Reken, 1999	Multiculturalism
20	Dual language programs enhance the global perspective of the learner.	School Leader	Multiculturalism
21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.	School Leader	Multiculturalism
22	Dual language programs expose students to a variety of cultural perspectives.	Teacher in a Dual Language Program	Multiculturalism
23	Dual language programs prepare students to be competitive in a globally connected world.	Teacher in a Dual Language Program	Multiculturalism

Table 2 (continued)

No.	Statement	Selected Sources	Category
24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.	Howard, Sugerman, Perdomo, & Adger, 2005	Program Structure
25	Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.	Howard et al., 2005	Program Structure
26	In cases where English is the widespread native language, the 90/10 model can be effective in that it encourages a higher level of proficiency in the target language.	Howard et al., 2005	Program Structure
27	Teacher professional development is essential to the success of dual language programs.	Tedick, Christian, & Fortune, 2001; Cummins, 2012	Program Structure
28	When teachers utilize effective communication strategies to create buy-in from parents, it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program.	Cummins, 2012	Program Structure
29	The use of effective classroom literacy practices that encourage students to read and write in both the native and target languages is helpful to the success of dual language programs.	Cummins, 2012	Program Structure

Table 2 (continued)

No.	Statement	Selected Sources	Category
30	Including language minority students in a two-way immersion program increases the ability of those students to learn English.	Christian, Mahrer, National Center for Research on Cultural Diversity and Second Language Learning, & Center for Applied Linguistics, 1992	Program Structure
31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	Ovando, 2003	School Improvement and Innovation
32	Dual language programs have grown in popularity in the past 20 years.	Collier & Thomas, 2004	School Improvement and Innovation
33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.	Public Schools of North Carolina, 2014	School Improvement and Innovation
34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.	Thomas & Collier, 2012	School Improvement and Innovation
35	Dual language programs promote a rigorous course of curriculum study in rural schools and often lead to instructional improvement.	Thomas & Collier, 2003	School Improvement and Innovation
36	Dual language programs promote instructional innovation in schools.	Thomas & Collier, 2003	School Improvement and Innovation
37	Dual language programs are proven school transformation models and the programs result in positive gains for both students and communities.	Olsen & Jaramillo, 1999	School Improvement and Innovation

Table 2 (continued)

No.	Statement	Selected Sources	Category
38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.	Howard et al., 2005	School Improvement and Innovation
39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.	Collier & Thomas, 2014	School Improvement and Innovation
40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.	Thomas & Collier, 2012; Genessee & Cloud, 1998; Sanchez, 2014	School Improvement and Innovation

Eight educational leaders including school and district leaders and one university professor provided input on the categorization and refinement of the Q Sample. These educational professionals were asked to review the statements and suggest revisions and provide recommendations for statements that could be combined or altered to achieve a higher degree of clarity:

1. Are the statements easy to understand and worded in such a way that the meaning is clear and precise?
2. Should any statements be combined?
3. Would you recommend that any statements be removed from the list?
4. Would you recommend that any statements be added to the list?

After reviewing the feedback, several edits were made. The following is a summary of the edits:

- Statement 2 originally read “When school administrators cultivate dual language program rigor with a vision of multiculturalism, the result is increased achievement and success for students.” The statement was changed for simplicity: “When school administrators foster a culture of rigor and multiculturalism in dual language programs, the result is increased achievement and success for students.”
- Statement 24 originally read as “Strategic grouping during literacy instruction in dual language programs is highly effective for literacy development in the target language.” For simplicity, the statement was changed to “Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.”
- Statement 25 originally read as “Students in dual language programs are required to speak in both their native and target languages throughout the day. Depending on the

percentage of instruction in the target language, this amount varies from 90/10 to 50/50. By using both languages during the school day, students develop mastery of bilingual communication.” It was suggested that this statement was too long. The revised statement reads as follows “Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.”

- Statement 28 originally read as “When teachers utilize effective communication strategies to create buy-in from parents it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program. It was also suggested that this statement was too long. The revised statements read as “The use of effective communication strategies by teachers results in greater parent buy-in and increased student success.”
- Statement 30 originally read as “The integration of language minority and language majority students is essential to the success of a two-way immersion program. It is also important to balance the demographics of the class between the two groups of students.” It was suggested that this statement was too long, and the meaning was unclear. The revision reads as “Including language minority students in a two-way immersion program increases the ability of those students to learn English.”

The Q Sample statements are presented in Table 2.

The P Sample

The P sample refers to the participants who sorted the statements. In this study, 33 parents and 21 educators associated with Dare County Schools and interested in learning more about a dual language immersion program sorted the statements and answered follow-up

questions. Participants at Nags Head Elementary met in the school's media center, and participants at Kitty Hawk Elementary met in the school's cafeteria. Parents that participated in the sort provided valuable insights into the viability of a dual language program in the district. Participants followed a Q sorting protocol when sorting the statements.

In the context of this study, understanding the participant's subjectivity was immensely important to the overall outcome of the research. Dare County is a rural county in Eastern North Carolina. Unlike most other rural counties in the area, the Dare County Public Schools performs high in academic measures. Therefore, parents and educators generally express confidence in the school system and often do not want to upset the status quo. However, some parents and educators have indicated a desire to see more innovation and improvement in the district's eleven schools. Q Methodology was a useful tool in analyzing the subjectivity of the participants' responses. As noted above, the participant's perspectives on the current status of Dare County Schools was a significant indicator for forming an understanding of their responses on the sorting activity. Q Methodology is best suited to organize and analyze findings consistent with this context.

Phase II: The Q Sort

During this phase of the data collection process, participants were asked to sort the statements of the Q sample in particular ranking order. In 1935, Dr. William Stephenson developed the protocol for Q Methodology as a means to quantify the subjectivity of the participant. Participants sort statements based on an agreement to disagree continuum. Unlike most ranking sorts, in this method participants were asked to rank the statements on a continuum instead of merely responding agree or disagree. Participants were informed that participation in this study was voluntary and they were given a consent form (see Appendix D).

In this study, participants were asked this question, “What outcomes offered by a dual language immersion programs have most influenced your decision to enroll your child in the program?” Statements from the Q sort shown in Table 2 were provided to participants on small index cards, and they were asked to rank them from ascending to descending order. Quantitative data received from the participants was analyzed using a statistical software program known as PQMethod. This program was used to create a correlation matrix that showed how the sorts related to each other. Ultimately, a five-factor solution was chosen because it provided the greatest diversification among participant perspectives.

Research Setting/Context

The researcher conducted research at Nags Head Elementary School and Kitty Hawk Elementary Schools. Participants devoted approximately one to two hours for the focus group interviews.

Study

This study sought to quantify the perceptions of parents and educators associated with Dare County Schools as it relates to the effective qualities of dual language immersion programs. The researcher utilized Q Methodology to effectively visualize a representation of multiple participant perspectives on dual language programs. This study utilized a mixed-method approach that included two phases of data collection. In Phase I, the researcher developed multiple statements that were extrapolated from important research on dual language programs. These statements evolved through several drafts and eventually become known as the Q Sample. During Phase II, participants sorted the Q Sample based on their preference for answers to several questions (sorting procedures provided in Appendix B). Participants engaged in a discussion on the reasons that lead to their preferred sorting order. Finally, Phase III allowed the

research to investigate further the perceptions of the participants by inviting them to return at a later date for a follow-up focus group interview. These focus groups provided participants with additional information on dual language programs and allowed them to engage in discussion on the implications of implementing such a program in Dare County Schools.

Participants

Current educational professionals in the field of bilingual education were invited to proofread the original Q statements and provide feedback. Eight educational leaders including school and district leaders and one university professor provided input on the categorization and refinement of the Q Sample. The researcher then reviewed this feedback and edited the statements accordingly. During Phase II, thirty parents from Nags Head Elementary School and thirty parents from Kitty Hawk Elementary School were invited to sort the Q Sample. Spanish speaking parents were invited to participate in the sort. All documents were translated into Spanish to anticipate any potential language barriers.

Additionally, thirty educators from Nags Head Elementary School and thirty educators from Kitty Hawk Elementary School were invited to sort the Q Sample. The Nags Head participants met in the school's media center, and the Kitty Hawk participants met in the school's cafeteria for a two-hour sorting session. Finally, in Phase III, ten parents and ten educators from these initial groups were invited to participate in the follow-up focus group interviews.

Data Collection

The researcher required each participant to sign a consent form that stated the study's purposes and procedures as well as the participants' rights. After agreeing to participate in the study, the participant was asked to sort the statements in the Q Sample. Each item was written on an individual card. Participants ranked the cards based on their preference for a series of

questions (see Figure 2). Following the sort, the researcher engaged the participants in conversations as to their sorting preferences.

Phase III: Follow-Up Interviews

Following the Q sort data collection, selected follow-up interviews were conducted. Participants were then grouped with others who shared statistically similar viewpoints. Participants were shown characteristics of highly effective dual language programs and asked to respond to the following questions: (1) Why do you feel that this dual language characteristic would benefit your child?, (2) Which statements represent your hopes and dreams for your child? and (3) What has had the greatest impact on how you sorted the cards?

The follow-up interviews were used to determine why the parents and educators responded the way they did regarding dual language immersion — understanding the participant's motivation and “why” is a critical component of fully understanding the participant’s subjectivity.

Data Analysis

Qualitative data collected in the post-sort focus groups was combined with the quantitative factor analysis to provide a more in-depth understanding of the participant’s beliefs and viewpoints. The focus group interviews provided an additional understanding of the participant’s viewpoints on dual language immersion.

Qualitative data was collected from the Q sorts and analyzed with a statistical analysis software program. The software program was used to create a correlation matrix that showed how each sort statistically related to the others. The factor analysis allowed the researcher to determine groups of sorts and therefore compare the perspectives of the participants.

The focus group interviews directly answered research question three: Why do these parents and educators hold these viewpoints on dual language immersion? The focus groups provided a greater understanding of the participants' perceptions of the effective characteristics and best-practices of dual language programs. The beliefs and perceptions of the participants in this study contributed significantly to the final policy recommendations that are outlined in chapter 5.

Subjectivity Statement

It is appropriate at this juncture of the study for me to acknowledge my own biases. This section is intended to provide the reader with insight into my background and my personal experiences as it relates to dual language immersion.

I am currently employed by Dare County Public Schools as a communications specialist. However, before accepting this role, I was a principal at a dual language school in Edgecombe County. I was able to see first-hand how dual language immersion greatly benefited the academic progress of the students in my school. Many of my students were from marginalized homes, and they lived below the poverty line. Witnessing students become successful despite these odds gave me a unique perspective. Therefore, I am well aware of the capability of dual language programs as it relates to closing the achievement gap and also to provide young learners with a rigorous program of study.

In my current position, I work directly with the superintendent of Dare County Schools. My primary responsibility is to develop a strategic communication plan that allows the school system to communicate with relevant stakeholders effectively. My goal in conducting this study was to learn about the highly effective characteristics of dual language immersion programs. All contexts are different and what works in one school system may not work in another. This study

will provide the superintendent with a clear perspective on the viewpoints of the general public as it relates to the adoption of a dual language immersion program in Dare County Schools.

Timeline

By the time the researcher submitted chapters 1-3 to the committee, a thorough literature review had been completed, and a comprehensive timeline was developed. Additionally, the following timeline highlights the inclusion of Q Methodology into the research process of collecting data. The proposal defense for this study was scheduled for April 18, 2018. Following the completion of revisions and edits suggested by the committee, the researcher received the committee's approval for the study to be submitted to IRB for review. Once approved by IRB, the researcher began collecting data from participants in early September. The data collection process continued through January 2019. Data collection included the P sample and follow-up interviews. Once sufficient data was collected, the researcher used statistical software to analyze the data and formulate an evidence-based evaluation. The dissertation defense was scheduled for March 7, 2019.

Chapter Summary

In this chapter, the researcher provided a rationale for using Q Methodology as the primary research methodology in this study. Additionally, the InQuiry method was outlined, and a description was given to the process outlined in this method. Development of the Q and P samples and the data analysis process was described. In chapter 4, the statistical findings of the study and examination of the post-sort interviews is presented.

CHAPTER 4: FINDINGS

Introduction

The purpose of this Q-methodology study was to understand the perceptions of educators and parents on the implementation of a Spanish Dual Language Program in Dare County Schools. The three primary research questions for this study were: What are the essential elements of a dual language immersion program? What are the perceptions of dual language programs by educators and parents in Dare County? Why do these parents and educators hold these viewpoints?

This chapter provides a detailed exploration of the methodology used for data collection and then an examination of the results. First, a review of the procedures that were used to collect data is warranted. Next, the quantitative aspects of the study will be examined. The data collected from fifty-four Q-sorts was loaded into a statistical analysis software program called PQMethod (Schmolck & Atkinson, 2014). This program determined the correlation matrix and also provided for each of the five-factor sorts. Finally, the chapter will conclude with an examination of the qualitative data that was collected following the statistical analysis. Qualitative data was collected from post-sort interviews, one-on-one interviews, and focus group interviews. The data collected from interviews provided additional insights that have resulted in greater understanding of the primary research questions for the study.

The data collected from fifty-four Q-sorts was loaded into a software program called PQMethod. The software was used to identify essential factors from the data. After factors were determined, participants that responded similarly were interviewed through one-on-one interviews and focus groups.

P-Sample, Q-Sample, and Coding

The participants for this study were educators and parents in Dare County. Two schools were selected to participate – Nags Head Elementary and Kitty Hawk Elementary. Both schools are implementing a Dual Language Immersion program. Nags Head is implementing a 50/50 program, and Kitty Hawk is implementing a 90/10 program. The higher number of Spanish-speaking students enrolled at Nags Head made it a perfect candidate for the 50/50 model. Kitty Hawk, on the other hand, has a very low demographic of Spanish first language students – thus the need for a 90/10 model in this context.

These variations in program models between the two schools have provided an additional level of context and diversity to this study. By comparing variations in program models and demographics, the researcher believes that the data will ultimately be more comprehensive. When conducting data at each location, the researcher benefited from professional contacts that increased the researcher's ability to recruit participants.

Fifty-four individuals participated in the P-sample. Of those participants, thirty-nine were female, twelve male, and three participants left the gender column blank on the sort form. Thirty-three of the participants were educators and twenty-one were parents. English was the primary language spoken in the home for the majority of the participants. Only one participant marked that Spanish was the primary language in the home. Except for six participants that left the race column blank, all others identified as white. Of the fifty-four participants, all but three loaded on one of the five factors that were used in the study. Three participants loaded on factor one, fourteen loaded on factor two, twelve on factor three, eighteen on factor four and four on factor five.

The Q-sample consisted of forty statements that provided participants with an opportunity to identify with particular concepts or beliefs on the cards. Two processes helped generate the statements: a review of the relevant literature on Dual Language programs, and interviews with educational professionals that have worked in Dual Language schools. After reviewing the literature and interviewing educators, the researcher compiled major themes and generated the statements. The statements were reviewed to eliminate redundancy and to clarify language and wording.

An anonymous coding system was used to maintain the participant's confidentiality. Additionally, each Q-statement was printed on a set of cards, and each card was assigned a number. When a participant placed the card on the model, their identity was transferred to that number. The anonymous code was transferred into PQMethod and when the data was analyzed the anonymity of the participant was maintained.

Correlation Matrix

PQMethod was used to compute correlations between Q-Sorts (McKeown & Thomas, 2013). This study used a correlation matrix that measured 54X54 where the number of participants was measured as (n=54). The correlation matrix was then analyzed to quantify the relationships between sorts (Watts & Stenner, 2012). It was important to determine the relationships between each sort and to analyze the context that led the participant to respond accordingly. In this study, each of the five factors was analyzed, and explanations and observations are provided in this chapter. Table 3 presents a truncated version of the correlation matrix. Correlation coefficients ranged from -1.0 to +1.0. A correlation of +1.0 is an indication of an identical match, meaning all of the cards were placed in the same column. Conversely, a correlation of -1.0 indicates an opposite match meaning participants placed all of the cards

Table 3

Correlation Matrix Between Sorts (Truncated)

Sorts	1	2	3	...	28	29	30
1	1.0	-.30	.41	...	.29	.44	.09
2	-.30	1.0	-.04	...	-.09	-.24	.13
3	.41	-.04	1.0	...	.35	.44	.13
...
28	.29	-.09	.35	...	1.0	.16	.03
29	.44	-.24	.44	...	.16	1.0	.45
30	.09	.13	.13	...	.03	.45	1.0

in the opposite column. During the factor analysis, the correlation matrix is used to group participants.

Factor Analysis

A factor analysis was used to group participants that shared similar views on the topic. When participants that share similar viewpoints are grouped together, a factor emerges. In this study, each factor represented a group of participants with viewpoints that were highly correlated to each other but uncorrelated with others. PQMethod grouped the sorts into eight un-rotated factors. The data was first run through three factors and then the process was repeated for four and five factors. After evaluating the three, four and five-factor analysis, a decision was made to use the five-factor solution. The five-factor solution included more participants with an acceptable amount of explained variance.

A Scree Plot of Eigenvalues is displayed in Figure 3. The first factor had an Eigen Value of 17.03, the second 5.17, the third 3.66, the fourth 2.79, the fifth 2.36, the sixth 2.06, the seventh 1.85, and the eighth had a value of 1.80. The Eigen Values were plotted and analyzed for factor strength and a distinctive line formed after factor one. Multiple factors are required to generate a more robust Q study. A single factor solution did not represent enough variance and did not provide enough of a distinction between participant responses. The purpose of this study was to analyze distinct viewpoints among the participants. A single factor solution would not have been conducive to formulating outcomes for this study's research questions.

A three-factor solution accounted for 48% of the variance among the sorts and included 48 of 54 participants at $p < .05$ significance. The three-factor solution produced high correlation values, indicating increased similarity between factors. A four-factor solution accounted for 58% variance and included 42 out of 54 participants. Again, the four-factor solution produced high

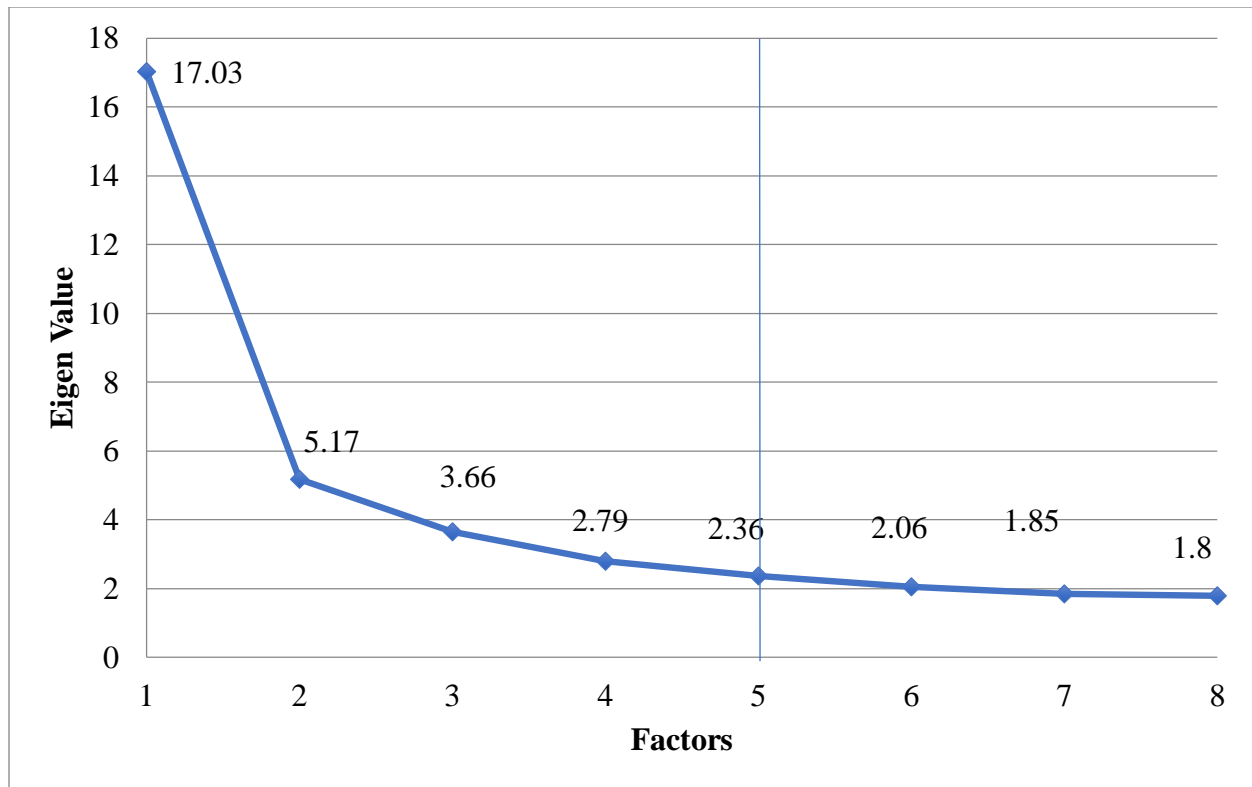


Figure 3. Scree Plot of Eigen Values.

correlation values. Increasing to five-factors produced a variance of 56% and significantly lower correlation values. Ultimately, a five-factor solution was accepted because it represented the ideal balance between high variance values, the inclusion of more participants, and lower correlation values. Participants were flagged and placed into the factor that matched their correlation. Flagging participants with confounding loads increased the number of participants to ensure that everyone loaded in a factor. Table 4 represents the variables used to determine the number of factors.

The complete table of correlation values among factors for the five-factor solution is shown in Table 5. Lower correlation values indicate more distinctive factors and are preferable for a robust study. As shown in the table, factor one and factor five are the most statistically distinct factors (correlation of .0200) while factor three and factor four are the most statistically similar (correlation of 0.6426).

Factor Loadings

PQMethod rotated factors analytically using the Varimax method. By seeking a mathematically superior solution, the Varimax method increased the variance among factors (Watts & Stenner, 2005). Each participant received a calculated correlation score. The correlation score measures the association between the Q sort of each participant and the statistical representation from the model factor array. Table 6 provides an overview of how each participant (P-sample) loaded on each factor. Each factor produced some participants with confounding loads. These participants met the 0.05 confidence threshold and could have been placed on multiple factors. By flagging participants with confounding loads, it ensured that everyone was eventually placed into a factor. As a result of the flagging process, the perceptions of all the study's participants were included in the factor analysis.

Table 4

Information Used to Determine the Factor Rotation

Factor Rotation Solution	Eigen Values	Explained Variance	Number of Participants	Correlation Among Factors
3 Factors	17.03	48%	48 out of 54	.34
	5.17			.58
	3.66			.49
4 Factors	17.13	58%	42 out of 54	.42
	5.17			.51
	3.66			.07
	2.79			.49
5 Factors		56%	39 out of 54	.15
	17.03			.21
	5.17			.10
	3.66			.17
	2.79			.02
	2.36			.54
				.44
				.21
				.64
				.38
				.42

Table 5

Correlations among Factor Scores

Factors	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	1.0000	0.2175	0.1066	0.1792	0.0200
Factor 2	0.2175	1.0000	0.5445	0.4444	0.2123
Factor 3	0.1066	0.5445	1.0000	0.6426	0.3886
Factor 4	0.1792	0.4444	0.6426	1.0000	0.4215
Factor 5	0.0200	0.2123	0.3886	0.4215	1.0000

Table 6

Factor Matrix Using Participants' Q-Sorts (Loadings)

Participant	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1	-0.4143	0.3227	0.4432*	0.2758	-0.0755
2	0.6777*	-0.0973	-0.1234	-0.1120	-0.2471
3	-0.1220	0.2140	0.5096*	0.0976	-0.0935
4	0.1258	0.4848	0.4818	0.5778*	0.0843
5	0.0083	0.3716	.01410	.04792	0.2359
6	-0.2177	0.4527	0.6105*	0.3176	-0.0938
7	-0.0176	0.2157	0.5072*	0.4175	-0.1165
8	0.2803	0.4836*	0.1972	0.4531	-0.0357
9	-0.1639	0.0097	-0.1572	0.6278*	0.1192
10	-0.0982	0.4453*	0.0846	-0.0278	0.2627
11	-0.1037	-0.3314	0.4234	0.6342*	0.2040
12	-0.0664	0.1943	0.4599*	0.1188	0.4038
13	0.2613	0.2769	0.3093	0.6145*	0.1316
14	0.0273	0.2769	0.2014	0.6272*	-0.2486
15	0.6597*	0.0521	0.1918	.04891	0.3558
16	-0.3495	-0.3892	0.0793	0.2032	0.4479*
17	0.3410	.05477*	0.2613	0.0794	0.0920
18	0.0497	0.5604*	-0.3220	0.3069	-0.1715
19	0.0441	0.3428	-0.2131	0.6849*	0.2851
20	0.5214	0.1793	0.2907	0.5967*	-0.0878

Table 6 (continued)

Participant	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
21	0.1707	0.7054*	0.4166	-0.0798	0.1032
22	0.7435*	0.2494	-0.0771	-0.0266	0.0904
23	-0.1357	0.6047*	-0.1622	0.3066	0.0865
24	0.2666	0.3466	0.2103	0.2847	0.4452*
25	0.0347	0.6861*	0.0528	0.0750	0.2677
26	0.2392	0.5465*	0.3990	0.1412	-0.2337
27	0.0705	0.6783*	0.2391	-0.0871	0.0062
28	0.0811	0.4571*	0.2500	0.1002	-0.1052
29	-0.1094	0.1454	0.5118	0.5956*	0.1629
30	0.2160	0.0756	-0.0471	0.7831*	0.0678
31	-0.0332	0.1103	0.6959*	-0.0224	0.0896
32	-0.0332	0.1103	0.6959*	-0.0224	0.0896
33	0.2160	0.0756	-0.0471	0.7831*	0.0678
34	-0.4300	-0.1386	0.3897	0.5349*	0.2044
35	0.1090	0.2569	0.6651*	0.5382	0.1567
36	0.0736	-0.1568	0.3470	0.4668*	0.2151
37	-0.1758	0.1957	0.3221	0.4826	0.4008
38	0.0696	0.2277	0.3753	0.6355*	-0.0990
39	0.2539	0.0145	0.5504*	0.4245	0.2578
40	-0.0906	0.2891	0.3039	0.5931*	0.1308
41	-0.0932	0.3522	0.5140	0.5157*	0.1763

Table 6 (continued)

Participant	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
42	-0.0990	0.1127	0.2608	0.7188*	-0.0020
43	-0.2209	0.5115*	.04470	0.3388	-0.0394
44	0.1318	0.1230	0.2828	0.3371	0.6084*
45	-0.3050	-0.0530	0.1378	0.6111*	0.2294
46	0.0917	0.1331	0.6543*	0.2925	0.1119
47	0.0611	0.0148	0.4426*	0.2438	0.3573
48	-0.1883	0.3890	0.3852	0.1721	0.0012
49	0.1765	0.5202*	0.4048	0.0271	0.0006
50	0.3801	0.6376*	0.0079	0.2082	-0.0669
51	0.0463	-0.1015	-0.0890	0.5836*	0.4852
52	0.1381	0.3491	0.6697*	0.1443	0.2546
53	-0.0662	-0.0273	0.6186*	-0.0421	0.1649
54	-0.2379	0.7060*	0.1493	0.1861	0.2386
%expl.Var.	6	13	14	17	6

Note. * p<.01.

The correlation score is proportional to the value of $1 / \sqrt{n}$ where n is the number of statements used in the study. The .05 significance level is calculated by $1/\sqrt{40} * 1.96 = 0.302$ for this study. The 0.01 significance level is calculated by $1/\sqrt{42} * 2.58 = 0.398$ for this study. All participants in this study loaded significantly on a factor at the $p < .05$ level. A majority of the participants met the requirements to load on the factors. The others were manually flagged so that all participants were included in the analysis.

On Factor One, six participants loaded significantly. On Factor Two, fourteen participants loaded at a level of statistical significance. On Factor Three, twelve participants loaded significantly. On Factor Four, eighteen participants loaded significantly. The remaining four participants loaded significantly on Factor Five.

A defining characteristic of Q-studies is the production of factor sorts based on specific configurations. The five factors that emerged from the data analysis consolidated the 40 statements and 54 participants into five perspectives. Each factor produces a statistically representative sort of the participants that shared similar perspectives. This is known as the model array. Table 7 presents the placement of each statement across all factors on the continuum of most preferred (+4) to least preferred (-4) in the model factor array. Q statements are listed in Table 2.

Humphrey's Rule used to validate the statistical reliability of each factor sort. This test compares the two highest loadings on a factor to twice the standard error. According to Humphrey's Rule, a factor is significant if the cross product of the two highest loadings is more significant than twice the standard error ($1/\sqrt{\text{number of statements}}$). As shown in Table 8, all of the factors in this study adhered to Humphrey's Rule, providing additional justification for the selection of a five-factor solution.

Table 7

Statements and Factor Placements

Card	Statement	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1	Students in dual language programs often outperform their traditional peers in reading and math assessments.	-1	0	-2	1	4
2	When school administrators cultivate dual language program rigor with a vision of multiculturalism, the result is increased achievement and success for students.	-2	2	2	-1	0
3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.	0	3	2	1	1
4	The longer students stay in a dual language program, generally, the higher their academic outcome.	-3	3	0	0	0
5	Dual language programs result in higher levels of student engagement.	-3	1	1	-1	-4
6	Language immersion students perform higher on standardized tests than their peers in traditional programs.	1	2	-1	1	-3
7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.	3	2	1	0	3
8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.	3	1	-1	-2	1
9	Students in dual language programs engage in activities that promote high cognitive development.	-1	4	3	1	1

Table 7 (continued)

Card	Statement	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
10	Dual language programs produce higher executive functioning skills in young learners.	1	3	3	4	2
11	As students become fluent in two languages, it increases their cognitive brain development.	0	2	4	2	2
12	In dual language programs, students learn to use different parts of their brain simultaneously.	0	4	3	3	4
13	Language immersion students typically have greater self-confidence and can articulate their thoughts and opinions in a more effective manner than their traditional peers.	0	-1	1	-1	-1
14	Dual language programs increase the fluency of the learner's native language.	1	1	1	3	-1
15	Students in dual language programs learn the conventions and foundations of language at an early age, and this results in greater levels of fluency in both languages.	1	-1	-1	3	2
16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.	-1	0	3	2	-2
17	Dual language classrooms promote <i>educacion</i> , the concept of embracing cultural relevancy while teaching content. <i>Educacion</i> promotes tolerance and culture understanding in the dual language classroom.	2	1	-1	4	2

Table 7 (continued)

Card	Statement	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
18	Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to an increase in academic learning.	1	-2	0	2	1
19	Third culture kids perform well in dual language programs because they already have a multicultural background.	2	-3	2	2	1
20	Dual language programs enhance the global perspective of the learner.	-2	-3	-4	-3	-1
21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.	2	-3	1	3	0
22	Dual language programs expose students to a variety of cultural perspectives.	-1	-2	2	2	0
23	Dual language programs prepare students to be competitive in a globally connected world.	-2	-1	-1	0	0
24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.	4	3	4	-1	3
25	Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.	-1	-1	0	-1	3

Table 7 (continued)

Card	Statement	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
26	In cases where English is the widespread native language, the 90/10 model can be effective in that it encourages a higher level of proficiency in the target language.	0	0	2	0	-2
27	Teacher professional development is essential to the success of dual language programs.	-4	-1	-2	1	3
28	When teachers utilize effective communication strategies to create buy-in from parents, it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program.	-3	1	-1	0	-2
29	The use of effective classroom literacy practices that encourage students to read and write in both the native and target languages is helpful to the success of dual language programs.	1	0	-2	-1	-1
30	Including language minority students in a two-way immersion program increases the ability of those students to learn English.	-2	-2	1	0	-2
31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	-4	-4	-4	-4	-1
32	Dual language programs have grown in popularity in the past 20 years.	-3	-4	-3	-4	0
33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.	3	1	-2	-2	-3

Table 7 (continued)

Card	Statement	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.	0	-3	-3	-3	-3
35	Dual language programs promote a rigorous course of curriculum study in rural schools and often lead to instructional improvement.	-2	-2	0	-2	2
36	Dual language programs promote instructional innovation in schools.	2	-1	-2	-2	-1
37	Dual language programs are proven school transformation models and the programs result in positive gains for both students and communities.	-1	2	0	-2	1
38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.	4	-2	0	1	-2
39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.	3	0	-3	-3	-3
40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.	1	0	-3	-3	-4

Table 8

Humphrey's Rule

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Cross Product of Two Highest Loadings	0.504	0.498	0.466	0.562	.458
Standard Error	0.158	0.158	0.158	0.158	0.158
Standard Error x 2	0.316	.316	0.316	.316	.316
Difference	0.188	0.182	0.150	0.246	0.142

Factor One: Innovation and School Transformation

A total of three participants loaded significantly on Factor One. This accounts for .05% of the participants and 6% of the variance. Table 9 provides demographic information for the participants that loaded on Factor One. All of the participants that significantly loaded on this factor were teachers except for one participant. All of the participants were educators that taught at or parents with children that attend Nags Head Elementary School except for one participant.

There were four female and two male participants, all were white, and all reported that English was the primary language spoken in their home. The highest loading participant (P22) was a male teacher from Nags Head Elementary. The lowest loading participant was also a male teacher from the same school.

Z-scores were calculated for each Q Sort statement within each factor group. The z-score is a measurement of the participant's deviation from the distribution mean as it relates to their preference of the statement. The ranking of each statement and its associated z-score is presented in Table 10.

The statement with the highest agreement in Factor One was Statement 24: "Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development." This statement had the highest z-score with a score of 1.620. This statement is placed in the +4 column in the model factor array, again indicating its high preference among participants.

The statements are presented in descending rank order. Statement 31, "History of language instruction in the USA is complicated and often influenced by social and political trends of the period" is ranked the lowest with a Z-score of -2.100 and is placed in the -4 column in the model factory array. The model factor array for Factor One is shown in Figure 4 and

Table 9

Participants Loading Significantly on Factor One

Participant	Loading	Role	Race	Gender	Primary Language
2	0.677	Parent	White	F	English
15	0.659	Teacher	White	F	English
22	0.743	Teacher	White	M	English

Table 10

Factor One Normalized Factor Scores

Card	Statement	Z-Score	Grid Placement
24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.	1.620	+4
38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.	1.574	+4
39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.	1.527	+3
33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.	1.431	+3
8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.	1.419	+3
7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.	1.119	+3
36	Dual language programs promote instructional innovation in schools.	1.072	+2
21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.	1.039	+2
19	Third culture kids perform well in dual language programs because they already have a multicultural background.	0.668	+2
17	Dual language classrooms promote <i>educacion</i> , the concept of embracing cultural relevancy while teaching content. <i>Educacion</i> promotes tolerance and culture understanding in the dual language classroom.	0.560	+2
14	Dual language programs increase the fluency of the learner's native language.	0.514	+2

Table 10 (continued)

Card	Statement	Z-Score	Grid Placement
10	Dual language programs produce higher executive functioning skills in young learners.	0.514	+1
29	The use of effective classroom literacy practices that encourage students to read and write in both the native and target languages is helpful to the success of dual language programs.	0.488	+1
6	Language immersion students perform higher on standardized tests than their peers in traditional programs.	0.476	+1
15	Students in dual language programs learn the conventions and foundations of language at an early age, and this results in greater levels of fluency in both languages.	0.443	+1
40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.	0.442	+1
18	Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to an increase in academic learning.	0.393	+1
13	Language immersion students typically have greater self-confidence and can articulate their thoughts and opinions in a more effective manner than their traditional peers.	0.309	0
26	In cases where English is the widespread native language, the 90/10 model can be effective in that it encourages a higher level of proficiency in the target language.	0.296	0
34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.	0.275	0
12	In dual language programs, students learn to use different parts of their brain simultaneously.	0.109	0
3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.	0.046	0

Table 10 (continued)

Card	Statement	Z-Score	Grid Placement
11	As students become fluent in two languages, it increases their cognitive brain development.	-0.059	0
22	Dual language programs expose students to a variety of cultural perspectives.	-0.117	-1
1	Students in dual language programs often outperform their traditional peers in reading and math assessments.	-0.133	-1
37	Dual language programs are proven school transformation models and the programs result in positive gains for both students and communities.	-0.167	-1
25	Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.	-0.262	-1
9	Students in dual language programs engage in activities that promote high cognitive development.	-0.488	-1
16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.	-0.526	-1
35	Dual language programs promote a rigorous course of curriculum study in rural schools and often lead to instructional improvement.	-0.822	-2
20	Dual language programs enhance the global perspective of the learner.	-0.927	-2
23	Dual language programs prepare students to be competitive in a globally connected world.	-0.943	-2
30	Including language minority students in a two-way immersion program increases the ability of those students to learn English.	-1.110	-2
2	When school administrators cultivate dual language program rigor with a vision of multiculturalism, the result is increased achievement and success for students.	-1.227	-2

Table 10 (continued)

Card	Statement	Z-Score	Grid Placement
32	Dual language programs have grown in popularity in the past 20 years.	-1.261	-3
28	When teachers utilize effective communication strategies to create buy-in from parents, it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program.	-1.348	-3
4	The longer students stay in a dual language program, generally, the higher their academic outcome.	-1.574	-3
5	Dual language programs result in higher levels of student engagement.	-1.574	-3
27	Teacher professional development is essential to the success of dual language programs.	-1.695	-4
31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	-2.100	-4

Least Prefer			No Preference			Most Prefer		
-4	-3	-2	-1	0	+1	+2	+3	+4
27	4	2	1	3	6	17	7	24
31	5	20	9	11	10	19	8	38
	28	30	16	12	15	14	33	
	32	35	22	13	18	21	39	
		23	25	26	29	36		
			37	34	40			

Figure 4. Factor One Model Sort.

indicates the preferences of participants in this group as it relates to the benefits of Dual Language Immersion programs. The model factor array provides a reliable indication of the viewpoints and perceptions of the participants in this grouping (Watts & Stenner, 2012). Analyzing the model factor array is a crucial step in the process of generating over-arching themes and also in naming the factors.

Table 11 presents the highest and lowest ranking statements. Analyzing Statements located on the boundaries of the distribution grid is a reliable method in determining the overall viewpoints of the participants that loaded in this factor. These extremes are essential markers in regards to the perceptions of participants on the effectiveness of Dual Language Programs.

As represented in Table 11, participants loading on Factor One sorted statements 24, 38, 7, 8, 33, and 39 on the +4 and +3 side of the distribution grid. The highest scoring statements in Factor One, contained language such as: “importance of literacy development,” “these programs lead to increased outcomes,” “dual language programs provide low-income students with opportunities for great economic success,” “dual language immersion is a proven school transformation model,” and “dual language immersion students are presented with greater opportunities.” Common themes among these statements were: (1) A belief that literacy development is a critical early childhood development that is directly correlated with greater economic success, (2) Equity for marginalized students is an essential justification for the implementation of dual language immersion programs, and finally, (3) dual language immersion programs are associated with highly successful school transformation.

Responses from participants during the post-sort survey provide a greater depth of explanation into the reoccurring themes in Factor One. In regards to the equity and school transformation themes, Participant 2 noted: “Most of my decisions regarding my child’s

Table 11

Factor One: High-Positive and High-Negative Statements

Score	Card	Statement
+4	24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.
+4	38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.
+3	7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.
+3	8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.
+3	33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.
+3	39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.
-3	4	The longer students stay in a dual language program, generally, the higher their academic outcome.
-3	5	Dual language programs result in higher levels of student engagement.
-3	28	When teachers utilize effective communication strategies to create buy-in from parents, it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program.
-3	32	Dual language programs have grown in popularity in the past 20 years.
-4	27	Teacher professional development is essential to the success of dual language programs.
-4	31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.

education concern the education of all students, not just her. Also, black students are generally underserved and under-represented. So, a program proven to help them is important to me” (personal communication, October 4, 2018). In regards to school transformation, participant 15 added, “I had trouble placing this card because I know it is important, but I don’t experience it as a teacher in a community that is mainly white students” (personal communication, October 4, 2018).

In regards to the theme of literacy development, Participant 22 commented, “The ultimate goal of schools is to prepare students for our globally connected world. To be prepared, they must be able to read. Reading in two languages will help them” (personal communication, October 4, 2018). Participant 15 and Participant 2 also noted that literacy development was an essential theme to them and they believed that success in the global world depended on students developing bilingual fluency.

During the focus group interview with participants from Factor One, the theme of equity and inclusion for marginalized students resurfaced. Participant 2 stated, “Because our community is predominately white, I feel like we have an obligation to consider the needs of black students. I would like to see more diversity in our schools and I think the dual language program is a great way to encourage more diversity” (personal communication, December 17, 2018). Participant 2 went on to state, “Although my daughter is white, closing the achievement gap for black students is very important to me. I want to teach my daughter to care about others, especially those that might seem different than her” (personal communication, December 17, 2018).

Participants that loaded significantly on Factor One believe that academic success should not be limited to one group of students, but rather, educational equity should be a priority for school transformation. Collectively, these participants believe that dual language programs can

benefit students because the programs increase literacy skills at a young age. While benefits such as cultural relevancy and diverse learning experiences were important to these participants (Statement 17, +2 column), academic achievement as measured by literacy development was far more critical.

Participants in Factor One identified professional development for teachers (Statement 27, -4 column) and the history and popularity of dual language programs (Statement 31, -4 column) as their least preferred considerations for highly effective programs. Participant 22's statement might provide insight into the low ranking of these statements, "I know professional development for teachers is critical. But, we have amazing teachers and they can learn on the fly. So, I didn't place this card high on the list even though I think professional development is important" (personal communication, December 17, 2018). This statement may imply that parents have faith and trust in the highly-qualified teachers in Dare County and therefore believe that the teachers are capable of implementing complex and sophisticated language programs. Participant 22, at least, gave this justification for the low ranking of Statement 27 despite his overall belief in the importance of the statement.

Factor Two: Academic Achievement

A total of fourteen participants loaded on Factor Two. This accounts for 25% of the participants and 13% of the variance. Table 12 provides demographic information for the participants that loaded on Factor Two. Teachers account for a majority of the participants in this factor. Of the participants that significantly loaded on Factor Two, as shown in Table 12, eleven out of fourteen were teachers. Eleven participants were female, two male and one participant left the demographic information blank. All were white with two leaving the form blank. Moreover, all spoke English as the primary language in the home with one leaving the form blank.

Table 12

Participants Loading Significantly on Factor Two

Participant	Loading	Role	Race	Gender	Primary Language
8	0.483	Parent	Blank	F	English
10	0.4453	Parent	White	F	English
17	0.547	Teacher	White	M	English
18	0.560	Teacher	White	F	English
21	0.705	Teacher	White	F	English
23	0.604	Teacher	White	F	English
25	0.686	Teacher	White	F	English
26	0.546	Teacher	White	F	English
27	0.678	Teacher	White	F	English
28	0.457	Teacher	White	F	English
43	0.511	Parent	Blank	M	English
49	0.520	Teacher	Blank	Blank	Blank
50	0.380	Teacher	White	F	English
54	0.706	Teacher	White	F	English

The ranking of each statement and its associated z-score for Factor Two is presented in Table 13.

The statement with the highest agreement in Factor Two was Statement 9: “Students in dual language programs engage in activities that promote high cognitive development.” This statement is ranked the highest in this factor with a Z-score of 1.724 and is placed in the +4 column in the model factor array.

The statements are presenting in descending rank order. Statement 31, “History of language instruction in the USA is complicated and often influenced by social and political trends of the period” is the lowest ranked statement with a Z-score of -2.419 and is placed in the -4 column in the model factor array. The model factor array for Factor Two is shown in Figure 5 and indicates the preferences of participants in this group as it relates to the benefits of Dual Language Immersion programs.

Table 14 presents the highest and lowest ranking statements. Participants loading on Factor Two sorted statements 9, 12, 3, 4, 10, and 24 on the +4 and +3 side of the distribution grid. The highest scoring statements in Factor Two contained language such as: “cognitive development,” “increased academic achievement and increased standardized test scores are important,” “The longer students stay in a dual language program, generally, the higher their academic outcome,” “Dual language programs produce higher executive functioning skills in young learners,” and “strategic grouping is important for literacy development”.

Common themes among these statements are: (1) a belief that success is measured through academic achievement and an increase in standardized test scores is valued as supporting evidence, (2) cognitive brain development is an important benefit of dual language immersion programs, (3) the increased length of a learner’s enrollment in a dual language

Table 13

Factor Two Normalized Factor Scores

Card	Statement	Z-Score	Grid Placement
9	Students in dual language programs engage in activities that promote high cognitive development.	1.724	+4
12	In dual language programs, students learn to use different parts of their brain simultaneously.	1.710	+4
24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.	1.335	+3
10	Dual language programs produce higher executive functioning skills in young learners.	1.184	+3
3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.	0.996	+3
4	The longer students stay in a dual language program, generally, the higher their academic outcome.	0.980	+3
11	As students become fluent in two languages, it increases their cognitive brain development.	0.960	+2
2	When school administrators cultivate dual language program rigor with a vision of multiculturalism, the result is increased achievement and success for students.	0.827	+2
7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.	0.826	+2
6	Language immersion students perform higher on standardized tests than their peers in traditional programs.	0.599	+2
37	Dual language programs are proven school transformation models and the programs result in positive gains for both students and communities.	0.557	+2

Table 13 (continued)

Card	Statement	Z-Score	Grid Placement
8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.	0.524	+1
14	Dual language programs increase the fluency of the learner's native language.	0.519	+1
28	When teachers utilize effective communication strategies to create buy-in from parents, it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program.	0.478	+1
5	Dual language programs result in higher levels of student engagement.	0.475	+1
17	Dual language classrooms promote <i>educacion</i> , the concept of embracing cultural relevancy while teaching content. <i>Educacion</i> promotes tolerance and culture understanding in the dual language classroom.	0.450	+1
33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.	0.442	+1
29	The use of effective classroom literacy practices that encourage students to read and write in both the native and target languages is helpful to the success of dual language programs.	0.365	0
26	In cases where English is the widespread native language, the 90/10 model can be effective in that it encourages a higher level of proficiency in the target language.	0.326	0
39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.	0.302	0
1	Students in dual language programs often outperform their traditional peers in reading and math assessments.	0.126	0
16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.	0.117	0

Table 13 (continued)

Card	Statement	Z-Score	Grid Placement
40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.	0.017	0
23	Dual language programs prepare students to be competitive in a globally connected world.	0.007	-1
15	Students in dual language programs learn the conventions and foundations of language at an early age, and this results in greater levels of fluency in both languages.	-0.101	-1
25	Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.	-0.177	-1
27	Teacher professional development is essential to the success of dual language programs.	-0.251	-1
13	Language immersion students typically have greater self-confidence and can articulate their thoughts and opinions in a more effective manner than their traditional peers.	-0.478	-1
36	Dual language programs promote instructional innovation in schools.	-0.523	-1
30	Including language minority students in a two-way immersion program increases the ability of those students to learn English.	-0.614	-2
38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.	-0.666	-2
35	Dual language programs promote a rigorous course of curriculum study in rural schools and often lead to instructional improvement.	-0.740	-2
22	Dual language programs expose students to a variety of cultural perspectives.	-0.905	-2
18	Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to increase academic learning.	-1.046	-2

Table 13 (continued)

Card	Statement	Z-Score	Grid Placement
21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.	-1.115	-3
19	Third culture kids perform well in dual language programs because they already have a multicultural background.	-1.246	-3
20	Dual language programs enhance the global perspective of the learner.	-1.526	-3
34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.	-1.694	-3
32	Dual language programs have grown in popularity in the past 20 years.	-2.350	-4
31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	-2.419	-4

Least Prefer			No Preference			Most Prefer		
-4	-3	-2	-1	0	+1	+2	+3	+4
31	19	18	13	1	5	2	3	9
32	20	22	15	16	8	6	4	12
	21	30	23	26	14	7	10	
	34	35	25	29	17	11	24	
		38	27	39	28	37		
			36	40	33			

Figure 5. Factor Two Model Sort.

Table 14

Factor Two: High-Positive and High-Negative Statements

Score	Card	Statement
+4	9	Students in dual language programs engage in activities that promote high cognitive development.
+4	12	In dual language programs, students learn to use different parts of their brain simultaneously.
+3	3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.
+3	4	The longer students stay in a dual language program, generally, the higher their academic outcome.
+3	10	Dual language programs produce higher executive functioning skills in young learners.
+3	24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.
-3	19	Third culture kids perform well in dual language programs because they already have a multicultural background.
-3	20	Dual language programs enhance the global perspective of the learner.
-3	21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.
-3	34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.
-4	31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.
-4	32	Dual language programs have grown in popularity in the past 20 years.

immersion program correlates to the learner's increased academic achievement. Participants in Factor Two reported having a strong belief in the importance of academic achievement.

The high value of academic achievement is reflected through several responses from participants in the post-sort survey and focus group interview. Participant 8 stated, "My desire for my child to be bilingual is not because of popularity or trends. It is for increased brain development." This participant went on to state, "Cognitive development and executive functioning skills will help my child be successful in school and adult life" (personal communication, December 17, 2018). Participant 17 stated, "Academic success and achievement for students should be the goal for any program" (personal communication, October 4, 2018). Participant 54 stated, "I'm all about executive functioning skills because as a teacher I see too many students that are lazy thinkers" (personal communication, October 4, 2018). Finally, Participant 23 responded, "Academic success creates self-confidence and articulation skills. These skills will carry a student anywhere in life" (personal communication, October 4, 2018).

Participants that loaded on Factor Two believe strongly that academic success is a primary benefit of dual language programs. During the focus group interviews, these participants indicated a strong preference that students develop executive functioning and utilize those skills to increase their cognitive development. These participants viewed academic achievement as a reliable indicator of the success of the program. Increased proficiency in standardized testing was also an attractive benefit for Factor Two participants.

Participants in Factor Two identified the popularity of dual language programs (Statement 32, -4 column) and the history of dual language education in the United States (Statement 31, -4 column) as their least preferred statements. In regards to the least preferred statements in Factor Two, Participant 23 stated, "I am not interested in popularity as a motivator.

I don't put much weight on political trends when making instructional decisions." Participant similarly stated, "Political trends aren't necessarily best educational practice." Participant 17 stated, "History and popularity should not be the basis for effective instruction" (personal communication, October 4, 2018).

Another theme that emerged from the participants that loaded in Factor Two was the low ranking of statements associated with school transformation and closing the achievement gap for marginalized populations. In regards to Statement 34, school turnaround models, Participant 54 stated, "That card isn't important because we are not a turnaround school" (personal communication, October 4, 2018).

While Factor Two participants did not collectively prefer statements that related to turnaround models, cultural relevance, closing the achievement gap, academic achievement in general, and cognitive development were highly favored. These participants expressed a strong belief in the benefits of a highly successful academic program. Additionally, these participants believe that standardized test scores help measure the success of an academic program. High test scores and successful academics are crucial to participants in Factor Two.

Factor Three: Social Awareness and Cognition

A total of twelve participants loaded significantly on Factor Three. This accounts for 22% of the participants and 14% of the variance. Table 15 provides the demographic characteristics of the twelve highest loading participants. Out of the participants, all are female except for two, all speak English as the primary language in the home except for one, and all are parents except for two participants who are teachers. The majority of the participants are from the Kitty Hawk community.

Table 15

Participants Loading Significantly on Factor Three

Participant	Loading	Role	Race	Gender	Primary Language
1	0.443	Parent	White	F	English
3	0.509	Parent	White	F	English
6	0.610	Parent	White	F	English
7	0.507	Parent	Blank	F	Spanish
12	0.459	Parent	Blank	F	English
31	0.695	Parent	White	F	English
35	0.665	Parent	White	F	English
39	0.550	Parent	White	F	English
46	0.654	Parent	White	M	English
47	0.442	Parent	White	F	English
52	0.669	Teacher	Blank	Blank	Blank
53	0.618	Teacher	Blank	M	English

The ranking of each statement and its associated Z-score for Factor Three is presented in Table 16. The statement with the highest agreement in Factor Three was Statement 11: “As students become fluent in two languages, it increases their cognitive brain development.” This statement is ranked the highest in this factor with a Z-score of 2.161 and is placed in the +4 column in the model factor array.

The statements are presenting in descending rank order. Statement 20, “Dual language programs enhance the global perspective of the learner” is the lowest ranked statement with a Z-score of -1.692 and is placed in the -4 column in the model factor array. The model factor array for Factor Three is shown in Figure 6 and indicates the preferences of participants in this group as it relates to the benefits of Dual Language Immersion programs.

Table 17 presents the highest and lowest ranking statements. Participants loading on Factor Three sorted statements 11, 24, 9, 10, 12, and 16 on the +4 and +3 side of the distribution grid. The highest scoring statements in Factor Three contained language such as: “multiculturalism,” “cognitive development,” “Dual language programs produce higher executive functioning skills in young learners,” and “strategic grouping is important for literacy development”.

Common themes among these statements are (1) a belief that success is measured through academic achievement and that social and emotional development is important, (2) cognitive brain development is an important benefit of dual language immersion programs, (3) the increased exposure to diverse cultural experiences is a benefit of dual language programs. Participants in Factor Three reported having a strong belief in the importance of academic achievement and exposure to culturally diverse experiences.

Table 16

Factor Three Normalized Factor Scores

Card	Statement	Z-Score	Grid Placement
11	As students become fluent in two languages, it increases their cognitive brain development.	2.161	+4
24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.	1.804	+4
16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.	1.631	+3
12	In dual language programs, students learn to use different parts of their brain simultaneously.	1.628	+3
10	Dual language programs produce higher executive functioning skills in young learners.	1.541	+3
9	Students in dual language programs engage in activities that promote high cognitive development.	1.035	+3
2	When school administrators cultivate dual language program rigor with a vision of multiculturalism, the result is increased achievement and success for students.	0.918	+2
19	Third culture kids perform well in dual language programs because they already have a multicultural background.	0.863	+2
26	In cases where English is the widespread native language, the 90/10 model can be effective in that it encourages a higher level of proficiency in the target language.	0.750	+2
22	Dual language programs expose students to a variety of cultural perspectives.	0.609	+2

Table 16 (continued)

Card	Statement	Z-Score	Grid Placement
3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.	0.553	+2
5	Dual language programs result in higher levels of student engagement.	0.543	+1
13	Language immersion students typically have greater self-confidence and can articulate their thoughts and opinions in a more effective manner than their traditional peers.	0.420	+1
30	Including language minority students in a two-way immersion program increases the ability of those students to learn English.	0.340	+1
21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.	0.327	+1
14	Dual language programs increase the fluency of the learner's native language.	0.284	+1
7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.	0.273	+1
18	Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to an increase in academic learning.	0.215	0
25	Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.	0.180	0
35	Dual language programs promote a rigorous course of curriculum study in rural schools and often lead to instructional improvement.	-0.030	0

Table 16 (continued)

Card	Statement	Z-Score	Grid Placement
38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.	-0.068	0
4	The longer students stay in a dual language program, generally, the higher their academic outcome.	-0.091	0
37	Dual language programs are proven school transformation models and the programs result in positive gains for both students and communities.	-0.162	0
17	Dual language classrooms promote <i>educacion</i> , the concept of embracing cultural relevancy while teaching content. <i>Educacion</i> promotes tolerance and culture understanding in the dual language classroom.	-0.186	-1
6	Language immersion students perform higher on standardized tests than their peers in traditional programs.	-0.291	-1
8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.	-0.355	-1
23	Dual language programs prepare students to be competitive in a globally connected world.	-0.470	-1
28	When teachers utilize effective communication strategies to create buy-in from parents, it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program.	-0.495	-1
15	Students in dual language programs learn the conventions and foundations of language at an early age, and this results in greater levels of fluency in both languages.	-0.504	-1
1	Students in dual language programs often outperform their traditional peers in reading and math assessments.	-0.733	-2
36	Dual language programs promote instructional innovation in schools.	-0.769	-2

Table 16 (continued)

Card	Statement	Z-Score	Grid Placement
29	The use of effective classroom literacy practices that encourage students to read and write in both the native and target languages is helpful to the success of dual language programs.	-0.850	-2
27	Teacher professional development is essential to the success of dual language programs.	-0.925	-2
33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.	-1.262	-2
40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.	-1.297	-3
34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.	-1.324	-3
39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.	-1.485	-3
32	Dual language programs have grown in popularity in the past 20 years.	-1.541	-3
31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	-1.546	-4
20	Dual language programs enhance the global perspective of the learner.	-1.692	-4

Least Prefer			No Preference			Most Prefer		
-4	-3	-2	-1	0	+1	+2	+3	+4
20	32	1	6	4	5	2	9	11
31	34	27	8	18	7	3	10	24
	39	29	15	25	13	19	12	
	40	33	17	35	14	22	16	
		36	23	37	21	26		
			28	38	30			

Figure 6. Factor Three Model Sort.

Table 17

Factor Three: High-Positive and High-Negative Statements

Score	Card	Statement
+4	11	As students become fluent in two languages, it increases their cognitive brain development.
+4	24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.
+3	9	Students in dual language programs engage in activities that promote high cognitive development.
+3	10	Dual language programs produce higher executive functioning skills in young learners.
+3	12	In dual language programs, students learn to use different parts of their brain simultaneously.
+3	16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.
-3	32	Dual language programs have grown in popularity in the past 20 years.
-3	34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.
-3	39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.
-3	40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.
-4	20	Dual language programs enhance the global perspective of the learner.
-4	31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.

Similar to the participants in Factor Two, Factor Three participants expressed a strong preference for academic achievement and cognitive development. Participant 31 stated, “It is proven that children learn to use multiple parts of their brain in dual language classrooms. This is one of the primary reasons why we enrolled our child in the program” (personal communication, October 3, 2018). Participant 35 expressed a similar belief on cognition and academic achievement, “I feel if my child can have enhanced brain development at such a young age, he will be all that much more prepared for the future” (personal communication, October 3, 2018). Finally, Participant 6 stated, “The way dual language students use their brain is very high on the list of reasons we chose this program” (personal communication, October 3, 2018). Participants in both Factors Two and Three ranked cognitive development as a highly preferred benefit of dual language immersion programs.

However, unlike many of the participants that loaded in Factor Two, Factor Three participants identified cultural diversity and multiculturalism as preferred benefits of dual language immersion programs. Participant 39 stated, “This program is a great opportunity to learn about how people live in other parts of the world. Americans tend to live in a bubble of first world comfort. This is something that will benefit my child throughout her life. It’s something that we as parents cannot teach on our own” (personal communication, October 3, 2018).

During the focus group interviews with Factor Three, the importance of social skill development was apparent from the discussion. One parent, Participant 6, stated, “I’m excited about my child learning to interact with other students positively. I think the experience of learning about diverse cultures is going to help with the socialization” (personal communication, December 17, 2018).

The majority of the participants in Factor Three were parents. While the participants valued academic achievement and cognitive development, they also sorted statements relating to cultural diversity and multiculturalism as highly preferred. Participants in Factor Three have shown a preference for their children to gain opportunities for new and unique cultural experiences in the dual language classroom. Additionally, the responses of the participants indicated a belief that exposure to culturally diverse experiences can benefit their child's academic and cognitive development.

Factor Four: Multiculturalism and Academic Achievement

A total of eighteen participants loaded on Factor Four. This accounts for 33% of the participants and 17% of the variance. Table 18 provides the demographic characteristics of the eighteen highest loading participants. The majority of the participants for Factor Four were parents. Out of the participants, all are female except for five, all speak English as the primary language in the home, and all are parents except for four participants who are teachers. Factor Four includes fairly even consistency of participants from both the Nags Head and Kitty Hawk communities.

The ranking of each statement and its associated z-score for Factor Four is presented in Table 18. The statement with the highest agreement in Factor Four was Statement 17: "Dual language classrooms promote *educacion*, the concept of embracing cultural relevancy while teaching content. *Educacion* promotes tolerance and culture understanding in the dual language classroom." This statement is ranked the highest in this factor with a Z-score of 1.681 and is placed in the +4 column in the model factor array. Table 19 presents a list of all statements.

The statements are presented in descending rank order. Statement 32, "Dual language programs have grown in popularity in the past 20 years" is the lowest ranked statement with a Z-

Table 18

Participants Loading Significantly on Factor Four

Participant	Loading	Role	Race	Gender	Primary Language
4	0.577	Parent	White	F	English
9	0.627	Parent	White	F	English
11	0.634	Parent	White	F	English
13	0.614	Parent	White	M	English
14	0.627	Parent	Blank	F	English
19	0.684	Teacher	White	F	English
20	0.596	Teacher	White	F	English
29	0.595	Teacher	White	F	English
30	0.783	Parent	White	M	English
33	0.519	Parent	Blank	F	English
34	0.534	Parent	White	F	English
36	0.466	Parent	Blank	Blank	Blank
38	0.635	Parent	White	F	English
40	0.593	Parent	White	F	English
41	0.515	Parent	White	M	English
42	0.718	Parent	Blank	Blank	Blank
45	0.611	Parent	White	M	English
51	0.583	Teacher	White	M	English

Table 19

Factor Four Normalized Factor Scores

Card	Statement	Z-Score	Grid Placement
17	Dual language classrooms promote <i>educacion</i> , the concept of embracing cultural relevancy while teaching content. <i>Educacion</i> promotes tolerance and culture understanding in the dual language classroom.	1.681	+4
10	Dual language programs produce higher executive functioning skills in young learners.	1.554	+4
12	In dual language programs, students learn to use different parts of their brain simultaneously.	1.428	+3
14	Dual language programs increase the fluency of the learner's native language.	1.362	+3
15	Students in dual language programs learn the conventions and foundations of language at an early age, and this results in greater levels of fluency in both languages.	1.359	+3
21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.	1.220	+3
11	As students become fluent in two languages, it increases their cognitive brain development.	1.050	+2
22	Dual language programs expose students to a variety of cultural perspectives.	0.966	+2
18	Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to increase academic learning.	0.936	+2
19	Third culture kids perform well in dual language programs because they already have a multicultural background.	0.928	+2

Table 19 (continued)

Card	Statement	Z-Score	Grid Placement
16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.	0.846	+2
6	Language immersion students perform higher on standardized tests than their peers in traditional programs.	0.828	+1
9	Students in dual language programs engage in activities that promote high cognitive development.	0.711	+1
1	Students in dual language programs often outperform their traditional peers in reading and math assessments.	0.310	+1
27	Teacher professional development is essential to the success of dual language programs.	0.297	+1
38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.	0.264	+1
3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.	0.207	+1
28	When teachers utilize effective communication strategies to create buy-in from parents, it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program.	0.201	0
7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.	0.057	0
4	The longer students stay in a dual language program, generally, the higher their academic outcome.	0.011	0
23	Dual language programs prepare students to be competitive in a globally connected world.	-0.012	0

Table 19 (continued)

Card	Statement	Z-Score	Grid Placement
30	Including language minority students in a two-way immersion program increases the ability of those students to learn English.	-0.062	0
26	In cases where English is the widespread native language, the 90/10 model can be effective in that it encourages a higher level of proficiency in the target language.	-0.248	0
24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.	-0.259	-1
2	When school administrators cultivate dual language program rigor with a vision of multiculturalism, the result is increased achievement and success for students.	-0.342	-1
5	Dual language programs result in higher levels of student engagement.	-0.367	-1
29	The use of effective classroom literacy practices that encourage students to read and write in both the native and target languages is helpful to the success of dual language programs.	-0.397	-1
13	Language immersion students typically have greater self-confidence and can articulate their thoughts and opinions in a more effective manner than their traditional peers.	-0.402	-1
25	Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.	-0.423	-1
35	Dual language programs promote a rigorous course of curriculum study in rural schools and often lead to instructional improvement.	-0.523	-2
33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.	-0.795	-2

Table 19 (continued)

Card	Statement	Z-Score	Grid Placement
37	Dual language programs are proven school transformation models and the programs result in positive gains for both students and communities.	-0.881	-2
36	Dual language programs promote instructional innovation in schools.	-0.898	-2
8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.	-1.041	-2
39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.	-1.115	-3
40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.	-1.216	-3
20	Dual language programs enhance the global perspective of the learner.	-1.378	-3
34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.	-1.940	-3
31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	-1.948	-4
32	Dual language programs have grown in popularity in the past 20 years.	-1.969	-4

score of -1.969 and is placed in the -4 column in the model factor array. The model factor array for Factor Four is shown in Figure 7 and indicates the preferences of participants in this group as it relates to the benefits of Dual Language Immersion programs.

Table 20 presents the highest and lowest ranking statements. Participants loading on Factor Four sorted statements 10, 17, 12, 14, 15, and 21 on the +4 and +3 side of the distribution grid. The highest scoring statements in Factor Four contained language such as: “executive functioning,” “Dual language classrooms promote *educacion*, the concept of embracing cultural relevancy,” “students learn to use different parts of their brain simultaneously,” and “Dual language programs increase the fluency of the learner’s native language,” “students learn the conventions and foundations of language,” and “students are exposed to international educators with vast cultural experiences.” Common themes among these statements are: (1) a belief that executive functioning is an important benefit to dual language programs, (2) cognitive brain development is an important benefit of dual language immersion programs, (3) the ability to interact with an international teacher is a positive experience for the student and exposes the student to new and unique cultural perspectives. Participants in Factor Four reported having a strong belief in the importance of social development through experiences that are culturally diverse and unique.

Participants that loaded in Factor Four have a high preference for culturally diverse experiences for students. In regards to Statement 22 (diverse cultural perspectives), Participant 34 stated, “They (children) are learning about other cultures from people who have lived that culture and that’s a powerful learning tool” (personal communication, October 3, 2018).

Least Prefer			No Preference			Most Prefer		
-4	-3	-2	-1	0	+1	+2	+3	+4
31	20	8	2	4	1	11	12	10
32	34	33	5	7	3	16	14	17
	39	35	13	23	6	18	15	
	40	36	24	26	9	19	21	
		37	25	28	27	22		
			29	30	38			

Figure 7. Factor Four Model Sort.

Table 20

Factor Four: High-Positive and High-Negative Statements

Score	Card	Statement
+4	10	Dual language programs produce higher executive functioning skills in young learners.
+4	17	Dual language classrooms promote <i>educacion</i> , the concept of embracing cultural relevancy while teaching content. <i>Educacion</i> promotes tolerance and culture understanding in the dual language classroom.
+3	12	In dual language programs, students learn to use different parts of their brain simultaneously.
+3	14	Dual language programs increase the fluency of the learner's native language.
+3	15	Students in dual language programs learn the conventions and foundations of language at an early age, and this results in greater levels of fluency in both languages.
+3	21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.
-3	20	Dual language programs enhance the global perspective of the learner.
-3	34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.
-3	39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.
-3	40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.
-4	31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.
-4	32	Dual language programs have grown in popularity in the past 20 years.

Participant 30 stated, “Increasing global and cultural awareness and tolerance is of paramount importance in today’s world, for American students in particular” (personal communication, October 3, 2018). Participant 11 expressed a similar viewpoint regarding cultural awareness, stating, “Global perspective and cultural learning make better humans!” (personal communication, October 7, 2018). Finally, Participant 9 stated, “Social skills are important in all areas of learning. This can also help children learn that different isn’t better or worse” (personal communication, October 7, 2018).

The importance of developing a culturally diverse perspective was an essential preference for participants in Factor Four. These participants felt strongly that a primary function of dual language immersion programs is to expose students to new and diverse cultural experiences. Almost all of the participants that loaded significantly on Factor Four listed “learning about a new culture” in the top three most important benefits of dual language immersion programs.

During the focus group interview with Factor Four, Participant 30 stated, “Teaching tolerance and understanding of other people is a necessary skill for our students. This program is going to help them appreciate diversity, and on the Outer Banks, there is not much diversity” (personal communication, January 11, 2019).

In addition to cultural experiences, Factor Four participants also highly preferred cognitive development for students in dual language programs. Participant 4 stated, “Cognitive development is most important to me, even above grades” (personal communication, October 7, 2018). And Participant 41 echoed similar remarks, “Cognitive brain development and function is important in our household” (personal communication, October 3, 2018).

Factor Five: High-Quality Instructional Programs and Teacher Professional Development

A total of four participants loaded on Factor Five. This accounts for .07% of the participants and 6% of the variance. Table 21 provides the demographic characteristics of the four highest loading participants. Out of the participants, all are female, all speak English as the primary language in the home, and all are white.

The ranking of each statement and its associated z-score for Factor Five is presented in Table 22. The statement with the highest agreement in Factor Five was Statement 12: “In dual language programs, students learn to use different parts of their brain simultaneously.” This statement is ranked the highest in this factor with a Z-score of 1.743 and is placed in the +4 column in the model factor array.

The statements are presented in descending rank order. Statement 5, “Dual language programs result in higher levels of student engagement” is the lowest ranked statement with a Z-score of -2.305 and is placed in the -4 column in the model factor array. The model factor array for Factor Five is shown in Figure 8 and indicates the preferences of participants in this group as it relates to the benefits of Dual Language Immersion programs.

Table 23 presents the highest and lowest ranking statements. Participants loading on Factor Five sorted statements 1, 12, 7, 24, 25, and 27 on the +4 and +3 side of the distribution grid. The highest scoring statements in Factor Four contained language such as: “Students in dual language programs often outperform their traditional peers,” “students learn to use different parts of their brain simultaneously,” “accelerated bilingual fluency,” and “Teacher professional development is essential to the success of dual language programs.” Common themes among these statements are: (1) a belief that students in dual language programs outperform their traditional peers on standardized tests, (2) professional development opportunities should exist

Table 21

Participants Loading Significantly on Factor Five

Participant	Loading	Role	Race	Gender	Primary Language
16	0.447	Teacher	White	F	English
24	0.445	Teacher	White	F	English
32	0.753	Parent	White	F	English
44	0.608	Parent	Blank	F	English

Table 22

Factor Five Normalized Factor Scores

Card	Statement	Z-Score	Grid Placement
12	In dual language programs, students learn to use different parts of their brain simultaneously.	1.743	+4
1	Students in dual language programs often outperform their traditional peers in reading and math assessments.	1.685	+4
7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.	1.600	+3
25	Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.	1.568	+3
27	Teacher professional development is essential to the success of dual language programs.	0.961	+3
24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.	0.959	+3
15	Students in dual language programs learn the conventions and foundations of language at an early age, and this results in greater levels of fluency in both languages.	0.939	+2
17	Dual language classrooms promote <i>educacion</i> , the concept of embracing cultural relevancy while teaching content. <i>Educacion</i> promotes tolerance and culture understanding in the dual language classroom.	0.936	+2
10	Dual language programs produce higher executive functioning skills in young learners.	0.928	+2
35	Dual language programs promote a rigorous course of curriculum study in rural schools and often lead to instructional improvement.	0.850	+2
11	As students become fluent in two languages, it increases their cognitive brain development.	0.662	+2

Table 22 (continued)

Card	Statement	Z-Score	Grid Placement
37	Dual language programs are proven school transformation models and the programs result in positive gains for both students and communities.	0.615	+1
9	Students in dual language programs engage in activities that promote high cognitive development.	0.548	+1
19	Third culture kids perform well in dual language programs because they already have a multicultural background.	0.497	+1
3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.	0.495	+1
18	Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to increase academic learning.	0.262	+1
8	Dual language immersion students are presented with greater career opportunities than their peers in traditional programs.	0.160	+1
21	In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically.	0.158	0
22	Dual language programs expose students to a variety of cultural perspectives.	0.117	0
4	The longer students stay in a dual language program, generally, the higher their academic outcome.	0.006	0
2	When school administrators cultivate dual language program rigor with a vision of multiculturalism, the result is increased achievement and success for students.	-0.024	0
32	Dual language programs have grown in popularity in the past 20 years.	-0.201	0

Table 22 (continued)

Card	Statement	Z-Score	Grid Placement
23	Dual language programs prepare students to be competitive in a globally connected world.	-0.216	0
36	Dual language programs promote instructional innovation in schools.	-0.247	-1
13	Language immersion students typically have greater self-confidence and can articulate their thoughts and opinions in a more effective manner than their traditional peers.	-0.252	-1
31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	-0.276	-1
14	Dual language programs increase the fluency of the learner's native language.	-0.308	-1
29	The use of effective classroom literacy practices that encourage students to read and write in both the native and target languages is helpful to the success of dual language programs.	-0.410	-1
20	Dual language programs enhance the global perspective of the learner.	-0.417	-1
16	Dual language programs lead to increased social awareness among students and help to create culturally responsive classrooms.	-0.475	-2
26	In cases where English is the widespread native language, the 90/10 model can be effective in that it encourages a higher level of proficiency in the target language.	-0.517	-2
28	When teachers utilize effective communication strategies to create buy-in from parents, it creates a cohesive classroom community in dual language programs. Input from parents is essential to the success of a dual language program.	-0.531	-2

Table 22 (continued)

Card	Statement	Z-Score	Grid Placement
38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.	-0.712	-2
30	Including language minority students in a two-way immersion program increases the ability of those students to learn English.	-1.005	-2
34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.	-1.019	-3
6	Language immersion students perform higher on standardized tests than their peers in traditional programs.	-1.291	-3
33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.	-1.684	-3
39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.	-1.684	-3
40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.	-2.113	-4
5	Dual language programs result in higher levels of student engagement.	-2.305	-4

Least Prefer			No Preference			Most Prefer		
-4	-3	-2	-1	0	+1	+2	+3	+4
5	6	16	13	2	3	10	7	1
40	33	26	14	4	8	11	24	12
	34	28	20	21	9	15	25	
	39	30	29	22	18	17	27	
		38	31	23	19	35		
			36	32	37			

Figure 8. Factor Five Model Sort.

Table 23

Factor Five: High-Positive and High-Negative Statements

Score	Card	Statement
+4	1	Students in dual language programs often outperform their traditional peers in reading and math assessments.
+4	12	In dual language programs, students learn to use different parts of their brain simultaneously.
+3	7	Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.
+3	24	Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.
+3	25	Students in dual language programs are required to speak in both their native and target languages throughout the day, and this leads to an accelerated bilingual fluency.
+3	27	Teacher professional development is essential to the success of dual language programs.
-3	6	Language immersion students perform higher on standardized tests than their peers in traditional programs.
-3	33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.
-3	34	Dual language programs have been shown to dramatically close the achievement gap between black and white students in early childhood literacy development.
-3	39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.
-4	5	Dual language programs result in higher levels of student engagement.
-4	40	Dual language programs have been shown to close the achievement gap between white and black learners dramatically.

for dual language teachers, (3) cognitive development occurs when students use both parts of their brain. Participants in Factor Five reported having a strong belief in the importance of the quality of the dual language program both in terms of academic achievement for students and teacher effectiveness.

Participants that loaded on Factor Five have a high preference for statements that support increasing the quality of the dual language program. These participants value the benefits of high-quality, high performing programs. Participant 24 stated, “I think it is important that the program have a lifelong impact. I’m not interested in the program because it is the ‘thing to do’ but because of the positive effect on kids” (personal communication, October 7, 2018). Participant 32’s relatively short answer is indicative of the theme of program quality, “In one word I can sum up my support for this program: science. It’s scientifically proven to support kids” (personal communication, October 3, 2018).

Consensus Statements

A consensus statement is a statement that was consistently ranked in a similar manner by participants in all factor sorts. The five-factor solution utilized by this study did not statistically produce any consensus statements. However, after reviewing the grid placements of three statements, a consensus pattern began to emerge. The consensus statements are shown in Table 24.

Statement 10, “Dual language programs produce higher executive functioning skills in young learners” was highly valued by all factors. The high value given to this statement indicates a preference among participants for students to develop both cognitive and social skills.

Conversely, the participants did not prefer Statement 31, “History of language instruction in the USA is complicated and often influenced by social and political trends of the period” or

Table 24

Consensus Statements

Card	Statement	Grid Placement by Factor
10	Dual language programs produce higher executive functioning skills in young learners.	+1 +3 +3 +4 +2
31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	-4 -4 -4 -4 -1
32	Dual language programs have grown in popularity in the past 20 years.	-3 -4 -3 -4 0

Statement 32, “Dual language programs have grown in popularity in the past 20 years.” In many responses, statements, and discussions, participants indicated that the historical trends of language education and the rising popularity of dual language programs in the past twenty years had little impact on their desired outcomes for the program.

Summary

Chapter 4 presented an analysis of the data. Data were collected from 54 participants, a combination of both parents and educators, regarding their perspectives and perceptions about the benefits of dual language immersion programs. Additional data was collected to gain a deeper understanding into the beliefs of the study’s participants on highly effective dual language immersion programs.

A combination of quantitative and qualitative data sources was used to analyze the participants' perceptions and beliefs of dual language immersion programs. After Q-sorts were completed, a factor analysis was used to analyze the statistical data. Five distinct factors emerged and were then explained and discussed in detail in this chapter. The factors include (1) Equity and Innovation, (2) Academic Achievement, (3) Social Awareness and Cognition, (4) Multiculturalism and Academic Achievement, and (5) High-Quality Instructional Programs and Teacher Professional Development.

Some participants were invited to return for post-sort interviews because they loaded significantly on one of the factors. Each of the five factors were analyzed to further explain the participants’ understanding of dual language programs. Chapter 5 provides an examination of the major findings in the study. It begins with a summary of the findings and expands on the relation to themes in the literature review. A thorough discussion on the implications for policy, educational practice, and future research is also provided.

CHAPTER 5: DISCUSSION AND IMPLICATIONS

Introduction

This chapter provides a summary of the main findings and an analysis of how the findings relate to the theoretical framework outlined in the literature review. Next, the findings are contextualized through the lens of current and future policy. Emerging themes are formulated into practical assertions that provide suggestions and predictions on the evolution of dual language programs. Finally, comparisons are made between the perceptions of educators and parents on effective dual language programs and current policies, practices, and research.

The primary research questions of this study were answered by formulating forty Q-statements that reflect the effective characteristics of dual language programs, analyzing participant responses and Q-sorts to determine names for each factor, and responses from participants in focus groups and follow-up conversations. A review of the research questions is presented in Table 25.

Summary of Emerging Factors

Factor One: Innovation and School Transformation

Parents and teachers that loaded on Factor One have a strong belief that dual language programs can produce innovation and change in their child's school. These participants identify strongly with the belief that the status quo is not good enough for their child. One teacher that loaded in this factor stated in a follow-up question, "The ultimate goal of school is to prepare students for our globally connected world" (personal communication, October 3, 2018). The opened ended responses of these participants generate a sense that the world is continually changing and it is the responsibility of educators to evolve with these changes. In addition to innovation and school transformation, several of the participants in Factor One also believe that

Table 25

Research Questions Revisited

Number	Question	Findings
One	What are the essential elements of a dual language immersion program?	40 statements (see Table 2)
Two	What are the perceptions of dual language programs by parents and educators in Dare County?	Factor names
Three	Why do these parents and educators hold these viewpoints?	Participant Responses

closing the achievement gap between white students and students of color is a highly effective characteristic of dual languages. Both Statement 40 (closing the achievement gap) and Statement 38 (50/50 models support language development for ESL students) were ranked highly favored by participants in this factor. This suggests that educators in this factor have a willingness to improve their practice and are likely to embrace change efforts that result in school transformation.

Factor Two: Academic Achievement

Participants in Factor Two prefer high academic achievement as an outcome for students in highly effective dual language programs. The majority of participants that loaded in this factor were teachers. This could explain the emphasis on academics in this factor. Statement 3 (dual language programs can result in a significant rise in student test schools) loaded in the +3 column on the Factor Two Model Sort. Additionally, many participants also included written responses that indicated a preference for high test scores. Since teachers account for the majority of participants in this factor, one explanation for the emphasis on academic achievement could be state and national education policy. For over a decade, teachers have been exposed to laws and policies that foster an emphasis on standardized testing. Teachers are held accountable for their student's academic growth and achievement. It seems likely that this culture of high-stakes testing had an impact on the card placement and responses from participants in Factor Two.

Factor Three: Social Awareness and Cognition

The participants that loaded on Factor Three believe firmly that an important outcome for students in dual language programs is the development of social awareness and cognitive functions. The majority of these participants were female parents. Statement 16 (increased social awareness and cultural responsiveness) loaded in the +3 column on the Factor Three Model Sort.

Participants responded that it was important for their child to develop social skills that would reflect openness and responsiveness to diverse cultural experiences. The geographic isolation of the Outer Banks may provide a reasonable explanation for the high social and cultural preferences of Factor Three participants. Many participants indicated that the lack of diversity on the Outer Banks was concerning to them. One female parent that loaded in Factor Three stated, “This program is a great opportunity to learn about how people live in other parts of the world. Americans tend to live in a bubble of first world comfort” (personal communication, October 3, 2018). Additionally, Factor Three participants have a strong preference for increased cognitive development among students in dual language programs. A female parent stated, “The way dual language students use their brain is very high on the list of reasons we chose this program” (personal communication, October 3, 2018).

Factor Four: Multiculturalism and Academic Achievement

Participants in Factor Four indicated that they favored the cultural diversity offered in dual language programs. The opportunity for students to interact with an international educator was highly preferred among these participants. A male parent stated, “Increasing global and cultural awareness and tolerance is of paramount importance in today’s world” (personal communication, October 3, 2018). These participants value the exposure to diverse cultural experiences. They also indicate that it is essential for students to interact with diverse cultural experiences at a young age to develop a life-long tolerance for different peoples and cultures. Participially, the parents that loaded in this factor, indicate that experiencing cultural diversity is just as important, or more important, than academic achievement for their child. Statement 17 (cultural awareness and *educacion*) loaded in the +4 column on the Factor Four Model Sort. Several of the parents that loaded on Factor Four and participated in post-sort interviews

indicated they had moved to the Outer Banks after living in other parts of the United States or the world. This might explain the high preference for multiculturalism among participants in this factor.

Factor Five: High-Quality Instructional Programs and Teacher Professional Development

Factor Five is the only factor where participants indicated a high-preference for teacher professional development. These participants provided responses that indicate a belief that the overall effectiveness of dual language programs is directly related to the quality of the teachers. As a result, continued professional development is essential to the long-term outcomes of dual language programs, according to Factor Five participants. Statement 27 (teacher professional development is essential to the success of dual language programs) loaded significantly in this factor. Participants also indicated a high-preference for math and science achievement for dual language students. These participants believe that teacher quality has a direct impact on student achievement.

Summary

In the post-sort survey, all participants were asked to identify the three most important benefits of dual language immersion. Generally, two major themes emerged from this question. First, all participants indicated that success in life beyond school was a preferred outcome for students in dual language programs. Additionally, many parents indicated that it was important for their child to develop a greater sense of the interconnectedness to the outside world. One parent said, “If my child can develop greater confidence and be prepared to confront the world when they grow up, I will be happy” (personal communication, October 7, 2018). Finally, many participants expressed a preference for increased student achievement and academic outcomes. One parent said, “my greatest hope is that the program will open my child’s mind to new ways of

learning” (personal communication, October 7, 2018). It is clear that parents and teachers have a high preference for increased academic achievement among students in the program. This is consistent with the general expectations of parents and teachers in Dare County. Dare County Schools has had a long history of producing high test scores in all of the ten schools in the district. Parents and teachers often express pride and gratitude in this accomplishment.

The fifty-four participants identified five factors that identified their perceptions of highly effective dual language programs. Factor One was “Innovation and School Transformation.” Factor Two was “Academic Achievement.” Factor Three was “Social Awareness and Cognition.” Factor Four was “Multiculturalism.” Factor Five was “High-Quality Instructional Programs and Teacher Professional Development.” The perceptions of these participants contributed to my overall understanding of the research questions. In the next section, these perceptions and emerging themes are explored through the lens of the reviewed literature outlined in chapter 2.

Findings in the Context of the Literature

The purpose of this study was to determine the preferences of teachers and educators as it relates to effective dual language immersion programs. A conceptual framework that focused on cognitive development was necessary for the researcher to formulate a working hypothesis. Cummings’ (1973) cognitive development hypothesis was used to explain the answers to the research questions of this study. Cummings formulated that bilingual education produced a positive effect on the cognitive development of young children. Because bilingual classrooms require students to switch between language codes, a higher level of cognitive function is achieved. The following paragraphs are intended to connect the findings of this study to the literature and examine the relationship between the two.

Cummings' cognitive development hypothesis proved essential in terms of framing the overall approach to this study. Participants were shown research-proven statements that represented the positive outcomes for students enrolled in dual language programs. By having participants sort these positive outcomes based on their preference, this study will formulate policy recommendations and suggestions for improving practice and research. The implications will have a real-life impact for the students and teachers in the dual language programs in Dare County Schools. Additionally, this study may add to the broader national discussion on dual language immersion program as it exists in our current educational environment.

Similarities in the Literature

Table 26 presents a summary of the findings that were consistent with the literature review. Academic achievement, cognitive development, and multiculturalism were consistent themes that emerged from the Q-sorts and participant follow-up questions. Overwhelmingly, participants responded that increased cognitive development was a highly preferred outcome for students in dual language programs. Teachers expressed this preference for the outcomes on academic achievement. One teacher indicated, "Increased achievement should be the goal for any academic program" (personal communication, October 7, 2018).

The literature confirms the positive impact of dual language programs on student achievement (Thomas & Collier, 2003). Every teacher that participated in this study indicated a preference for increased student achievement. Undoubtedly, the state and federal testing mandates that are imposed on teachers contributed to their high preference for increased student achievement. For the greater part of the last two decades, teachers have been flooded with testing mandates and evaluated by the growth of their students on standardized tests. It is not surprising that given this high-stakes culture of accountability the teachers in this study would place a

Table 26

Statements from Literature Accepted by Participants

Statement	Literature Source(s)	Placement in the five model factor arrays
3 - When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.	Lindholm-Leary, 2001	0+3+2+1+1
9 - Students in dual language programs engage in activities that promote high cognitive development.	Thomas & Collier, 2003	-1+4+3+1+1
10 - Dual language programs produce higher executive functioning skills in young learners.	Thomas & Collier, 2012	+1+3+3+4+2
11 - As students become fluent in two languages, it increases their cognitive brain development.	Genesee & Cloud, 1998	+0+2+4+2+2
24 - Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development.	Howard et al., 2005	+4+3+4-1+3
29 - The use of effective classroom literacy practices that encourage students to read and write in both the native and target languages is helpful to the success of dual language programs.	Thomas & Collier, 2003	+1+0-2-1-1

higher emphasis on achievement. When compared to the parent responses, that overwhelmingly placed a value on multiculturalism, one can make the inference that perspective matters. Parents are not held to the same accountability for their child's academic performance, as are the teachers. The implications of a high preference for achievement will be discussed later in this chapter.

Differences from Literature

Some of the findings were not consistent with the literature review. Table 27 represents statements that were generated from the literature review but rejected during the sorting activities and focus groups. Many of the participants rejected the statement (Statement 30) concerning the benefits of 50/50 programs for language minority students. One possible explanation for this is the low percentage of language minority parents that participated in this study. It could be that participants, particularly parents, did not assign a high preference to this statement because they viewed it as not relating to their child. An additional explanation may include a low percentage of Spanish-speaking students enrolled at Kitty Hawk Elementary. Participants from this school may not have viewed Statement 30 as applying to their circumstances.

Additionally, participants rejected statements concerning the popularity and history of dual language programs (Statements 31 and 32). These statements were generated from the literature and intended to provide the participants with a sophisticated perspective on the emerging and historical trends of bilingual education. In many of the post-sort surveys and focus groups, participants stated that the historical context of dual language programs did not matter to them. Instead, the overall quality of the program and the lasting student outcomes were listed as a much higher preference. Later, in the implications for practice, I will discuss the history of dual language programs as it relates to the context of this study. The evolving political dialogue on

Table 27

Statements from Literature Rejected by Participants

Statement	Literature Source(s)	Placement in the five model factor arrays
30 - Including language minority students in a two-way immersion program increases the ability of those students to learn English.	Olsen & Jaramillo, 1999	-2-2+1+0-2
31 - History of language instruction in the USA is complicated and often influenced by social and political trends of the period.	Crawford, 1999	-4-4-4-4-1
32 - Dual language programs have grown in popularity in the past 20 years.	Thomas & Collier, 2012	-3-4-3-4+0

immigration and the legalization of English as a national language is an important discussion point on the long-term evolution of language programs. While the participants in this study rejected these relating statements, the political context of bilingual education will be relevant for educators and administrators in the coming years.

Findings from the Study

The five-factor groups generated similarities and differences. Participants in all factors indicated a high preference for increased cognitive development, literacy development in both languages, and multiculturalism. Statements that indicated the influence of historical and national trends on the current development of dual language programs were ranked with a low preference in all five factors. This section will examine the major findings that emerged from the factor analysis.

Factor Two, *Academic Achievement*; and Factor Three, *Social Awareness and Cognition* each displayed characteristics of cognitive development and executive functioning. Both factors placed Statement 12 (In dual language programs, students learn to use different parts of their brain simultaneously) in either the +3 or +4 column. Additionally, statements that indicated increased executive functioning skills such as the ability to respond to complicated tasks and diverse social situations also loaded high in these two factors. Factor Two loaded an overwhelming majority of teachers while Factor Three included a significantly larger population of parents. While Factor Two did indicate a higher preference for academic achievement and test scores, a similarity among both factors is the high preference for social skill development. Participants that loaded in these two factors believe increased executive functioning, both academically and socially, is an essential outcome for students in dual language programs.

Participants in Factor Four, *Multiculturalism and Academic Achievement* indicated a much high preference for diverse cultural experiences than participants in other factors. Statement 17, “Dual language classrooms promote *educacion*, the concept of embracing cultural relevancy while teaching content. *Educacion* promotes tolerance and culture understanding in the dual language classroom” was ranked highest in the +4 column in Factor Four. Factors One and Five loaded Statement 17 in the +2 column and Factor Three loaded in the -1 column. These participants believe that dual language programs contribute to the increased cultural awareness of enrolled students.

Additionally, Statement 21, “In dual language programs, students are exposed to international educators and have the opportunity to learn about other cultures authentically” loaded in the +3 column in Factor Four. This indicates further proof that participants in Factor Four want students to gain a diverse multicultural experience by engaging in the dual language classroom. The research by Valenzuela (1997) outlined in the literature review supports the benefits of such a diverse cultural experience. Additionally, Thomas and Collier (2012) have demonstrated the cultural benefits of dual language programs.

Factor Five, *High-Quality Instructional Programs and Teacher Professional Development* was a unique factor and the only group to place a high preference for teacher professional development. These participants indicated a high preference for the overall instructional quality of the program. As a result, preference was given to professional development and necessary program resources. Participants in Factor Five ranked Statement 40, “Dual language programs have been shown to close the achievement gap between white and black learners dramatically” as their least preferred statement. While this statement was ranked lower in other factors, Factor Five is the only factor where it appears in the -4 column. In post-

sort questions and focus group interviews, participants in Factor Five indicated that because there is a low population of African-American students enrolled in Nags Head and Kitty Hawk Elementary Schools, they did not see the relevance of the statement. One mother said, “If I lived in a different area with higher demographic of African-American students, I would have ranked that statement higher” (personal communication, January 25, 2019). Additionally, innovation and school turnaround strategies ranked lower in Factor Five. This indicates that these participants value instructional methods that produce results but are not overly innovative or experimental in nature.

There is a distinctive difference in preferences among teachers and parents. Factor Two, *Academic Achievement* is primarily composed of teachers. Only one parent loaded in the factor. However, a majority of the participants in Factor Three, *Social Awareness and Cognition* are parents. Factor Two participants indicated a strong preference for achievement and increased test scores on standardized assessments. While participants in Factor Three indicated a preference for achievement, multicultural experiences were ranked higher in this factor. One possible explanation for the academic preferences of Factor Two participants is the overwhelming pressure that teachers experience to produce increased test scores. Teachers are held accountable for the proficiency and growth of their students as measured by standardized testing. In recent years, teachers have experienced a barrage of policies and legislation that connects career status to testing results. As a result, over the past decade, teachers have been conditioned to emphasize testing and accountability. Contrarily, parents may have a different perspective. Factor Three participants placed a much higher preference for social functioning and awareness than on academic achievement. Factor Three participants believe that academic achievement is essential.

However, they also believe that cultural experiences and social functioning are two higher preferred outcomes for dual language students.

Additional comparisons can be made from the perspectives of participants in Nags Head compared to Kitty Hawk. The socio-economic demographics between the two cities may explain some of the differences in perspectives among the participants. The majority of the participants that loaded on Factor Three live in the Kitty Hawk community, while Factor Two participants were primarily from Nags Head. The cost of living and real estate value is higher in Kitty Hawk than in Nags Head, and other socio-economic indicators are likewise determined. Kitty Hawk Elementary is a high-performing school and was named as a 2019 National Blue-Ribbon School for high academic achievement. Because academic scores are higher at Kitty Hawk than at Nags Head, Factor Three participants may take academic achievement for granted – assuming that their child will be successful. Factor Two participants may view achievement as more of a struggle and something that has to be earned through a more strategic approach.

The participants indicated a high preference for one statement that originated from the pilot phase of the study. The pilot phase included surveys and discussions with bilingual professionals and educators currently working in schools that implement dual language programs. Table 28 provides a summary of the statement from the pilot phase that was given a high preference by participants.

An example of an important statement in this study that was not substantiated in the literature was Statement 7 “Dual language programs provide low-income students with a marketable skill set that can result in greater economic success later in life.” While this statement seems self-evident, the literature review in this study did not encounter any relevant research studies that have tracked the economic status of low-income students in dual language programs

Table 28

Statements Generated from Pilot Study Accepted by Participants

Statement	Literature Source(s)	Placement in the four model factor arrays	Participant comments
7 – Dual language programs provide low-income students with a marketable skill set.	Survey participant:	+3+2+1+0+3	P

compared to low-income students in traditional classrooms. While it seems logical to assume that the ability to speak two languages would increase the career competitiveness of dual language students, a major research study has not proven this statement. However, participants of the pilot phase of this study suggested that they perceived increased skill development and career competitiveness for low-income students as significant benefits to dual language immersion programs.

Other than Statement 7, all of the responses from participants in the pilot phase were corroborated by major research studies in the literature review. A comparative study between career success among low-income students in dual language programs and traditional classrooms would be a contribution to the literature regarding bilingual education programs. Additionally, comparative studies that follow the career success rates beyond high school graduation and college graduation is worthy of pursuit among contemporary researchers. In the next section, an examination is given to the major themes that emerged from the sorting activities, post-sort interviews, and focus groups.

Study Assertions

This section combines contemporary trends in the literature with emerging themes from the study's research findings to formulate the assertion that bilingual education is a fundamentally essential learning outcome, and that all students in the United States should have access to these programs. The literature review and the findings substantiate the claim that bilingual education is a necessary component of the educational experience for twenty-first-century learners. Districts and schools that wish to implement innovative programs and consider the benefits of instructional transformation should consider implementing a dual language program.

Bilingual Education Promotes Twenty-First Century Learning

Dual language programs prepare students to be successful in the globally connected world of the twenty-first century. As a result, all students should have access to bilingual classrooms (An Evaluation of Counseling). The National Education Association (NEA) recently ranked global education in the top ten emerging trends for education reform (Global Education in the US, 2019). NEA's recommendation that schools incorporate global education is consistent with the preferences of many participants in this study.

Exposure to global curriculum and global educators can help prepare students to live and work in complex environments and situations. Unfortunately, many classrooms in the United States fall short of achieving this recommendation. A study on the integration of global topics into the mainstream national curriculum produced alarming results (Vulliamy & Webb, 1993). Many school districts in the United States have placed a priority on increasing math and literacy scores. Therefore, schools place a focus on math and reading concepts in lower grades and social studies curriculum is often reserved for elective classes or non-existent altogether. According to a 2006 study, North Carolina teachers ranked social studies a distant third behind reading and math in terms of important subjects to teach (Rock et al., 2006). The same study also found that when social studies are taught in lower grades, it is often for only 15-30 minutes for 2-3 days a week (Rock et al., 2006). Another study found similar results. Through a survey of school leaders, Von Zastrow and Janc found over 900 principals that reported they encourage their teachers to take time from social studies to focus on reading and math (Von Zastrow & Janc, 2004). This is troubling in many ways. Because social studies curriculum often promotes global content, this trend is a reliable indicator that students are missing out on a robust global education. Moreover, as Harari (2019) points out in his recent book, the lifestyles and work

environments of the future will be substantially different than what we experience today. Student success is, therefore, dependent on our education system adapting to include diverse curricula and encouraging teachers to embrace innovative teaching practices.

Harari (2019) suggests that schools should move away from teaching curriculum that is information-based and instead, focus on a curriculum that is problem-based. The twenty-first-century student does not have trouble finding information. It is the complicated question of what should I do with this information that presents the challenge. Consider this passage by Harari (2019): “How can we prepare ourselves and our children for a world of such unprecedented transformations and radical uncertainties? A baby born today will be thirtysomething in 2050. If all goes well, that baby will still be around in 2100, and might even be an active citizen of the twenty-second century. What should we teach that baby that will help him or her survive and flourish in the world of 2050 or of the twenty-second century? What kind of skills will he or she need in order to get a job, understand what is happening around him or her, and navigate the maze of life?” (Harari, 2019, p.263).

Since we cannot predict what the world will look like in 2050, schools must make important decisions based on what we know now. Regardless of the changes in our world, the citizen of the future will need to possess critical thinking skills to be able to make decisions for themselves. Dual language immersion can support the development of these skills and provide students with diverse cultural experiences. We can reasonably assume that the ability to coexist with diverse groups of people and communicate through multiple languages will become a necessary skill set. As a result, school districts should move quickly to incorporate robust global content and bilingual education into the mainstream curriculum.

Implications

The findings of this study have generated significant implications for policy, education practice, and research. In this section, recommendations are made for changes in district policy, followed by suggestions for instructional best practices, and a conclusion of recommendations for further research.

Policy

The district should establish stronger communication practices that encourage more Spanish-speaking families to apply for the dual language program. Out of the fifty-four participants that contributed to this study, only one indicated that Spanish was the primary language spoken in the home. When asked to discuss the challenges that often prevent Spanish-speaking families from participating in school events, one educator stated: “It’s been a cultural thing. The dynamics of the community have been that families didn’t feel comfortable speaking Spanish at public events. So, many just stayed home. Now that the district has brought a dual language program it’s helping ease that anxiety. But, we still have a long way to go to get more involvement from our Hispanic families” (personal communication, February 10, 2019.) As of 2018, approximately ninety-four percent of the 36,000 Dare County residents identify their ethnicity as white only. Less than 6% identify as Hispanic or Latino (U.S. Census, 2018).

The large percentage of white residents has contributed to majority-centric culture in the county. Minority students sometimes feel that they must assimilate in order to be accepted by their white peers. An eighth-grade student at First Flight Middle School shared this response during an interview: “My parents both speak Spanish, but they do not allow me or my brothers to speak Spanish at home. We know how to speak Spanish, but we are not allowed to. My mom doesn’t want us to have a Spanish accent when we speak in English” (personal communication,

November 8, 2018). The same student also shared that if he speaks Spanish around his white friends while playing soccer, they sometimes make fun of him. This example illustrates the challenges faced by district educators when recruiting Spanish-speaking families to apply for the dual language program.

There are opportunities for the district to accelerate the inclusion of more minority families in the dual language application process. One suggestion is for the district to commit to translating all correspondences into Spanish. The increasing number of Spanish dual language teachers can serve as translators for these types of initiatives. In addition to strengthening the communication pathway between the district and Latino families, this would also send a message that the school system is embracing bilingual practices. The district should also add a translation feature to school websites. Since the website is frequently used as a communication platform and a resource manager for essential documents, this would further increase the ability of Spanish-speaking families to access enrollment applications and forms. This would also strengthen the district's commitment to providing an inclusive environment for all students and parents.

Secondly, the district should explore the integration of a robust global education curriculum for grades K-12. While the North Carolina Standard Course of study includes pockets of globally-aligned curriculum, that is not enough to meet the career expectations demanded of high school graduates. Parents that participated in this study overwhelmingly indicated that diverse cultural experiences were highly preferred outcomes for their children. While dual language classrooms naturally incorporate multicultural experiences, the addition of a vertically aligned global curriculum would enhance cultural learning outcomes for all students in the district.

Practice

The unique perspectives that emerged from the five factors can be useful to district educators as they design a sustainability plan for the dual language program. This section will provide three recommendations for practice: a focus on the implementation of high-quality literacy programs, a dynamic professional development plan, and the adoption of culturally relevant teaching practices in all classrooms.

Statement 24, “Strategic grouping during literacy instruction in dual language programs is highly effective for bilingual literacy development” was highly preferred by all factor groups except Factor Four. Participants indicated through post-survey questions and focus groups that bilingual literacy was an essential outcome for dual language students. This district should make a sustained investment in developing a cross-curricular literacy model for students through the K-12 continuum. Dual language classrooms can be a great model for effective literacy programs because these classrooms fully utilize guided reading groups and teachers progress monitor the performance of the students. While this is a common practice in most elementary classrooms, it is not consistent in secondary grades. However, all students can benefit from guided reading and progress monitoring. The district could benefit by investing professional development resources into training all K-12 English Language Arts teachers on the foundations of effective literacy programs. When the current kindergarten and first-grade dual language cohorts enter into middle school in five years, they will benefit by experiencing a consistent, cross-curricular, literacy program.

Participants indicated that program quality was an important indicator of successful dual language programs. While the district has developed an excellent induction program for newly arriving international educators, it will be well served to design a comprehensive professional

development plan, especially as the current cohorts progress to higher grade levels. Dual language educators that arrive from foreign countries must have a high tolerance for change and adaptability. Often, these teachers arrive in the United States two weeks before the start of school. In this short amount of time, they must find a place to live, secure a driver's license and social security card, and prepare their classroom for the first day of school. Once they overcome these obstacles, they must adapt to serve the learning needs of their students. The American education system is noticeably different than in Latin America. Dual language teachers need continued mentorship, support, and professional development to be successful in their practice. Currently, the district has a strong teacher induction program, and a dual language coordinator helps new teachers find housing and secure the necessary government documents. However, a thorough professional development plan that focuses on instructional improvement does not exist.

As the dual language program progresses into higher grade levels, teachers will need to receive professional development in content-specific disciplines. The fifth-grade math curriculum, for example, was revised during the 2019-2020 school year. Dual language teachers are not as familiar with the curriculum developments in the North Carolina Standard Course of Study and, therefore, require guidance from instructional support professionals. In the absence of a well-designed professional development plan, the overall instructional quality of the dual language program will suffer – especially as the program advances into higher grade levels.

Finally, the district should commit to providing professional development opportunities that result in the increased use of culturally relevant teaching practices. Ladson-Billings (2017) spent twenty-five years researching highly effective teachers in low-income districts with diverse demographics. She found that the most culturally effective teachers employed the following

three characteristics: (1) a determination to understand the complexities associated with culture, (2) an ability to integrate historical events associated with race and culture into a contemporary framework, and (3) an ability to draw from outside events to help students develop their critical consciousness. These educators were able to increase learning outcomes for Black children in low-income schools by placing importance on culturally relevant pedagogy.

Teachers in the district could benefit from development experiences that promote culturally relevant teaching practices. Participant 1, a teacher at Nags Head Elementary, indicated that the most significant benefit to the school's dual language program was the potential for increased cultural awareness within the school. The teacher also indicated that "I had trouble placing Statement 33 (dual language turnaround programs) because I know it is important, but I don't see the need for turnaround in my community which is mainly white students" (personal communication, October 4, 2018). When asked to explain in a follow-up interview, the teacher said, "Our school could benefit from more cultural awareness. Most of our students are white and they have never left the Outer Banks. They don't know what it is like to go to a school with a highly diverse student body. This worries me that when the students leave the Outer Banks for college or a career, they will struggle to interact with other people" (personal communication, January 9, 2019).

The benefits of culturally relevant pedagogy could be profound for students in the district. A middle school student at First Flight Middle School explained his anxiety for displaying his native culture in school, "My parents will not let me speak in Spanish at home. They are worried that I will learn to speak in English with a Spanish accent, and they do not want me to be looked down on by my peers" (personal communication, November 8, 2019). This student later explained that other students often tease him if he speaks in Spanish at school.

Examples like this one indicate the need for increased cultural awareness in all classrooms within the district.

One suggestion would be to incorporate a globally themed curriculum in each school. In this model, teachers would teach the North Carolina Standard Course of Study, but so do through a global lens. Students would be exposed to multiple perspectives and encouraged to consider the impact that topics such as climate change, political instability, and population growth have on the broader global community. Districts that have employed this global approach have often hired international teachers to help lead the integration of global content into each classroom. These international teachers also promote cultural awareness. The district would be well served to explore strategies to promote increased cultural awareness and diversity in each school.

Research

Findings from this study identified several areas for future research that may provide educators and parents with a greater understanding of the practical outcomes of dual language programs. The work of Thomas and Collier has proven that learning outcomes for bilingual students increase dramatically. Lindholm-Leary and Genesee substantiate this assertion. However, no significant research study exists that compares the college graduation rates and career placement of dual language students versus students in traditional programs. Researchers suspect that biliteracy is a marketable skillset. However, a formal research study has not examined the topic.

Additionally, there is a need for a comprehensive study to examine the sustainability of dual language programs in rural, low-income districts. Many districts in rural Eastern North Carolina are implementing dual language programs. However, these districts have historically faced significant challenges associated with teacher turnover and attrition and financial

instability. It can be assumed that teacher attrition and budget constraints would have an impact on the overall quality and sustainability of dual language programs. However, a longitudinal study has not been conducted to evaluate the sustainability of language programs in rural districts.

This study focused on two communities within the district. While the responses from participants provided unique perspectives and valuable feedback, the study could have been expanded to include broader representation from the other communities. The findings of this study are specific to this district and may vary in usefulness depending on the context of other areas. Another method to conduct a similar study would have been to invite participation from several rural districts in Eastern North Carolina. A larger sample size may have been possible with this type of study and given the researcher the ability to compare responses between multiple districts.

Finally, this study only invited participation from educators associated with a dual language program or parents that currently have a child enrolled in a dual language program. However, it would be interesting to compare the perspectives of parents without an enrolled child versus parents with a child in the program. Would the perspectives of the two parent groups be similar or different?

Study Limitations

In this section, I present two limitations of this study: the low ethnic diversity of participants and the sentence construction of two statements in the Q-sort. While I tried to recruit a more diverse population of participants, only one out of fifty-five respondents specified Spanish was the primary language spoken in the home. The vast majority of the participants were female and identified as white. The lack of participation from respondents of diverse cultural and

ethnic backgrounds is disappointing. Several strategies were used to recruit diverse participation such as: translating the invitation and survey questions into Spanish, distributing advertisements for the survey sessions through local Hispanic organizations and daycares, and by sending an email to all of the dual language parents. On additional explanation for the low turnout of diverse participants is the overall low dual language enrollment of students from diverse backgrounds. As identified earlier in this chapter, promoting engagement among the Hispanic community is a recommendation for policy and also a reflection point for this study.

Statement 31, “History of language instruction in the USA is complicated and often influenced by social and political trends of the period” and Statement 32, “Dual language programs have grown in popularity in the past 20 years” were difficult to understand for many participants. It would have been helpful to rephrase the statements to reflect the historical influence and importance of language education in the United States. However, many participants did not understand the purpose of the statements as compared to the other thirty-eight, and therefore, ranked them lower on the model sort.

It is appropriate for me also to mention that my position as Digital Communications and Middle School Director may have contributed to a limitation in this study. Before the district launched dual language programs in August 2018, I attended over twenty community forums and town hall events with Superintendent Farrelly to inform parents on the benefits of the program. Ultimately, overwhelming parent interest was the determining factor that resulted in the launch of the program. Nonetheless, some of the teachers may have seen my positionality as an influencer during their participation in this study.

Conclusion

This study was designed to identify the most critical outcomes of dual language immersion programs. It was also an intention to capture the perspectives of parents and educators on the effectiveness of dual language programs. Chapter 5 provided a summary of this study's main findings and presented a discussion and analysis of the findings as related to the literature. Later in the chapter, a discussion is given to implications for policy, practice, and research.

Q-methodology was used to capture the perceptions of parents and educators on effective dual language programs. Both quantitative and qualitative data were used to analyze and understand the responses of the participants.

Following the data analysis, a name was given to each of the five factors. Each name represents the significant themes and beliefs of that factor. The five factors are *Innovation and School Transformation* (Factor One), *Academic Achievement* (Factor Two), *Social Awareness and Cognition* (Factor Three), *Multiculturalism and Academic Achievement* (Factor Four), and *High-Quality Instructional Programs and Teacher Professional Development* (Factor Five).

The findings of this study were mostly consistent with the essential characteristics of dual language programs as identified in the literature. Participants agreed that cognitive brain development, multiculturalism, and global education were highly preferred outcomes for dual language students. Participants engaged in the sorting activity, post-sort survey questions and selected participants were invited to focus group interviews. Collectively, these methods demonstrated the parents and educators' profound commitment to improving the schools in Dare County. Once the data collection portion of this study had concluded, I completed the sorting activity and responded to the post-sort questions.

Epilogue and My Q-Sort

After collecting the data outlined in chapter 4, I completed a Q-sort using the forty statement cards, a post-sort questionnaire, and interview questions to examine my own perceptions on effective dual language programs. I taught high school social studies for six years in Edgecombe County. I then spent two years serving as the principal of a dual language global school. This school received Title I funding and over seventy percent of the students qualified for free or reduced lunch. In December 2017, I started as the Digital Communications and Middle School Director. Figure 9 displays the responses from my Q-sort.

The highest and lowest placed cards for my Q-sort are listed in Table 29. My highest placed card was Statement 18, “Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to increased academic learning.” My lowest placed card was Statement 31, “History of language instruction in the USA is complicated and often influenced by social and political trends of the period.” Statement 18 represents my belief that the primary purpose of school is to prepare students to interact with diverse groups of people. Teaching students positive social skills is important to me. While I believe that the historical influences of language education are important, not all of the cards could be placed on the positive side of the model grid. Therefore, I placed a higher preference on other cards and ranked Statement 31 as my least preferred card.

During the sorting activity, I did not feel that any particular statement about my beliefs was missing from cards. I connected and related to each card. Near the end of the activity, it was difficult to make choices for sorting the remaining cards. There were several cards that I wanted to sort on a higher scale, but there was not enough room for all of them. An advantage to Q-methodology is that participants are forced to make choices about their preferences. While this

Least Prefer			No Preference			Most Prefer		
-4	-3	-2	-1	0	+1	+2	+3	+4
31	23	7	27	19	14	20	33	18
13	5	11	12	34	28	40	22	39
	3	9	26	37	36	17	35	
	32	30	10	15	16	24	38	
		4	2	29	8	1		
			25	21	6			

Figure 9. My Q-sort.

Table 29

My High-Positive and High-Negative Statements

Score	Card	Statement
+4	18	Teaching students to appreciate cultural diversity can produce positive social skill development. This can lead to increased academic learning.
+4	39	Dual language immersion is a proven school transformation model and has been used effectively in many low-income districts to raise academic achievement scores.
+3	33	Public Schools in North Carolina have increasingly turned to DL programs as school turn around models.
+3	22	Dual language programs expose students to a variety of cultural perspectives.
+3	35	Dual language programs promote a rigorous course of curriculum study in rural schools and often lead to instructional improvement.
+3	38	50/50 language immersion programs have been shown to produce increased outcomes for English Language Learners.
-3	23	Dual language programs prepare students to be competitive in a globally connected world.
-3	5	Dual language programs result in higher levels of student engagement.
-3	3	When dual language programs are structured appropriately and according to the local context of the community and school, student achievement scores can rise significantly.
-3	32	Dual language programs have grown in popularity in the past 20 years.
-4	31	History of language instruction in the USA is complicated and often influenced by social and political trends of the period.
-4	13	Language immersion students typically have greater self-confidence and can articulate their thoughts and opinions in a more effective manner than their traditional peers.

forces the participant to grapple with their order of preference, it benefits the research process generally.

Compared to the five-factor sorts, my sort was not identical to any of the other factors but shared the most similarity with Factor One: Innovation and School Transformation. This is consistent with the statements that I provided during the post-sort questions and my follow-up narrative that is provided earlier in this section.

Personal Reflection: Impact on My Practice

Our current model of schooling has worked well for some. For others, it has been insufficient. Some refer to our current model of schooling as the “factory model” because it took shape at the height of the Industrial Revolution. At the turn of the twentieth century, policymakers felt compelled to design a system that could quickly teach basic reading and math skills to first-generation immigrants and those migrating from farms to cities. It is disappointing to me that one hundred years later, we still perpetuate this model. My experiences over the past decade as a teacher, principal, and district leader have shown me that our students deserve better.

Throughout the process of writing this dissertation, I have had hundreds of conversations with parents, educators, and students. In each conversation, I have learned something new. I have found that on the days when pessimism and doubt become pervasive in my thinking, I can always find inspiration and optimism by visiting a school. Our young people have incredible dreams for their future. Recently, I had a conversation with Kalie, a first-grade student enrolled in the dual language program at Kitty Hawk Elementary School. I asked Kalie to tell me about her hopes and dreams for her future. She responded confidently with clarity and purpose by saying, “When I grow up, my dream is to save the planet and protect endangered animals. I go to the beach with my mom and we pick up trash so that it doesn’t hurt the fish” (personal

communication, September 24, 2018). When Kalie grows up, she will have many opportunities to change the world. Technology is evolving as a liberating tool for the hopes and dreams of activists and philanthropists around the world. Even though we face significant challenges in our world, I am becoming more confident that young people like Kalie will find creative solutions to overcome these challenges.

Dual language programs are not the only solution for school reform. They do, however, represent an opportunity for us to change our thinking about the purpose of school. Dual language programs promote innovation and change. They provide students with the unique ability to speak two languages, and that can open ample opportunities for the student's future. I have seen the transformative power of dual language programs when I was a principal. I saw the program transform a hopeless community into an oasis of innovation and progress. I saw students that were two and three grade levels behind their peers overcome learning gaps and learn to speak and write in two languages. This is the kind of transformation that all students and all schools deserve. It can happen.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL



EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building · Mail Stop 682
600 Moyer Boulevard · Greenville, NC 27834
Office **252-744-2914** · Fax **252-744-2284** ·
www.ecu.edu/ORIC/irb

Notification of Exempt Certification

From: Social/Behavioral IRB
To: [Keith Parker](#)
CC: [Matthew Militello](#)
Date: 6/1/2018
Re: [UMCIRB 18-001021](#)
Educator and Teacher Perceptions of Dual Language Immersion

I am pleased to inform you that your research submission has been certified as exempt on 5/29/2018. This study is eligible for Exempt Certification under category #1 & 2.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B: Q SORTING PROTOCOL



Title of Research Study: AN ANALYSIS OF THE PERCEPTIONS OF PARENTS AND EDUCATORS ON DARE COUNTY SCHOOLS' SPANISH DUAL LANGUAGE IMMERSION PROGRAM

Principal Investigator: Keith Parker, under the guidance of Dr. Matthew Militello

The purpose of this study is to investigate the perceptions of parents and educators in Dare County on the effectiveness of dual language immersion programs.

Overview of Today's Research Process:

1. Description of research study and research process
2. Directions for sorting activity
3. Independent questions after the sorting activity
4. Complete demographic information

Sorting Activity

Directions:

1. Lay out the number cards from left to right with the negative (-) numbers on your left (see picture below):
2. Read through all 40 cards to become familiar with the statements.
3. As you read through the statements for a second time, organize them into three piles:
 - On the right, place the cards that you feel are most representative of what you believe are the most essential elements determining a highly effective dual language program.
 - On the left, place the cards that are least representative.
 - In the middle, place the cards that you feel less certain about.
4. Beginning with the pile on the right, place the two cards that you agree with the most under the +4 marker.
5. Now, turning to your left side, place the two cards that you disagree with the most under the -4 marker.
6. Continue this process until all the cards are placed. You are free to change your mind during the sorting process and switch items around.
7. When completed, you should have the following number of cards under each row:
 - You should have 2 cards under markers +4 (most agree) and -4 (least agree).
 - You should have 4 cards under markers +3 (agree) and -3 (disagree).
 - You should have 5 cards under markers +2 (slightly agree) and -2 (slightly disagree).
 - You should have 6 cards under markers +1 (slightly agree) and -1 (slightly disagree).
 - You should have 6 cards under marker 0 (neutral).

- Code: _____

- [illegible]

Post Sort Questions:

1. Please list the two cards in the +4 column and your reasons for placing them there.

Card #: _____

Card #: _____

2. Please list the two cards in the -4 column and your reasons for placing them there.

Card #: _____

Card #: _____

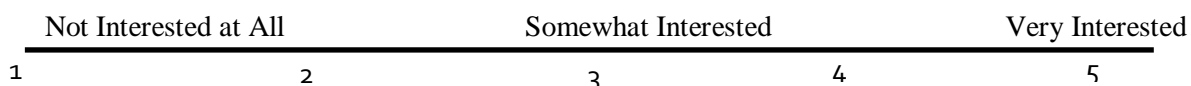
3. Were there specific statements that you had difficulty placing? Choose one and please list the number of the statement and describe your dilemma.

Card #: _____

4. Is there a statement that you would have like to see in the sort? If so, what would the card have said and where would you have placed it?

5. In order, what are the three most important benefits from dual language immersion?

6. On the scale below, circle your interest in seeing a dual language program established in your school.



Demographic Information (OPTIONAL):

Gender: ☐ Male ☐ Female Race: _____

Are you a: ☐ Parent ☐ School Administrator ☐ Teacher

Primary language spoken in your home: ☐ English ☐ Spanish

Would you be willing to participate in a follow-up session to learn more about how other parents and educators responded? ☐ Yes ☐ No

If so, please provide your email address and phone number below:

Email: _____ Phone: _____

APPENDIX C: POST-SORT FOCUS GROUP PROTOCOL

Title of Research Study: AN ANALYSIS OF THE PERCEPTIONS OF PARENTS AND EDUCATORS ON DARE COUNTY SCHOOLS' SPANISH DUAL LANGUAGE IMMERSION PROGRAM

Principal Investigator: Keith Parker, under the guidance of Dr. Matthew Militello

Please provide a unique identifier that you will remember: _____

Participants with significant loading on a particular factor will sit with other participants who loaded on the same factor. Loading on a common factor represents a statistically significant shared perspective. The purpose of this focus group interview is to gain additional insights about why participants have their perspectives.

After performing factor analysis on all of the responses, your responses are statistically similar to those shown in the model sort.

Condition for Sorting the Statements—as a reminder, keep this statement in mind as you participate in the focus group interview process: *What benefits by enrolling your child in a dual language program are most appealing to you?*

- 1) Who is in your group? Describe any similarities and/or differences (e.g., demographics, job, etc.)
- 2) Which statements best represent your shared perspective?
- 3) What has had the greatest impact on how you sorted your cards the way you did?
(Examples- past experience, courses, current knowledge, etc.). Please explain your answers.
- 4) What name would you assign that represents the perspective illustrated by this model sort? Explain why and the meaning associated with that name—use card statements to provide justification for your name.

APPENDIX D: CARD SORT CONSENT FORM

Consent to Take Part in Research that has Potentially Greater than Minimal Risk Information You Should Think About Before Agreeing to Take Part in This Research

Title of Research Study: AN ANALYSIS OF THE PERCEPTIONS OF PARENTS AND EDUCATORS ON DARE COUNTY SCHOOLS' SPANISH DUAL LANGUAGE IMMERSION PROGRAM

Principal Investigator: Keith Parker, under the guidance of Dr. Matthew Militello

Researchers at East Carolina University (ECU) study issues related to society, health problems, environmental problems, behavior problems and the human condition. To do this, we need the help of volunteers who are willing to take part in research.

Why am I being invited to take part in this research?

The purpose of this study is to seek to understand the perceptions of parents and educators in Dare County, North Carolina in regard to the possibility of the public school system implementing a Spanish Dual Language Program. As a parent or educator, you are being invited to take part in this research to share your perceptions, viewpoints, and insights about the potential benefits of dual language immersion. You are being asked to take part in the study by participating in a Card Sort Exercise. Your participation in this study is voluntary. The decision to take part in the research is yours to make. You have the right to participate, to choose not to participate or to stop participating at any time without penalty. By conducting this research, we hope to obtain findings to the following research questions:

1. What are the essential elements of a dual language immersion program?
2. What are the perceptions of dual language programs by parents and educators in Dare County?
3. Why do these parents and educators hold these viewpoints?

If you volunteer to participate in this research, you will be one of about 40 people to do so.

Are there reasons I should not take part in this research?

There are no known reasons for why you should not participate in this research study. In addition, there are no known risks to participating in the card sorting exercise.

What other choices do I have if I do not take part in this research?

You can choose not to participate.

Where is the research going to take place and how long will it last?

The research will be conducted at the Dare County Board of Education Conference Room in Nags Head, NC. The total amount of time you will be asked to volunteer for this study is approximately one hour.

What will I be asked to do?

You will be asked to sort 42 cards. These cards have statements about dual language immersion printed on them and your task will be to sort them according to your own beliefs and viewpoints. This process should take approximately one hour. After sorting the cards, you will be asked to complete a brief questionnaire about the statements and why you placed specific statements in certain areas on the distribution grid. In addition, you will be asked some general demographic data. Your card sort and your responses to the questionnaire will remain confidential.

What might I experience if I take part in the research?

We do not know of any risks (the chance of harm) associated with this research. Any risks that may occur with this research are no more than what you would experience in everyday life. We do not know if you will benefit from taking part in this study. There may not be any personal benefit to you but the information gained by doing this research may help others in the future.

Will I be paid for taking part in this research?

We will not be able to pay you for the time you volunteer while being in this study.

Will it cost me to take part in this research?

It will not cost you any money to be part of the research.

Who will know that I took part in this research and learn personal information about me?

ECU and the people and organizations listed below may know that you took part in this research and may see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- Any agency of the federal, state, or local government that regulates human research. This includes the Department of Health and Human Services (DHHS), the North Carolina Department of Health, and the Office for Human Research Protections.
- The University & Medical Center Institutional Review Board (UNCIRB) and its staff have responsibility for overseeing your welfare during this research and may need to see research records that identify you.

How will you keep the information you collect about me secure? How long will you keep it?

The information in the study will be kept confidential to the full extent allowed by law. Data will be stored securely on a computer and in a location of which only the researcher has access. No reference will be made in oral or written reports that could link you to the study.

What if I decide I do not want to continue in this research?

You can stop at any time after it has already started. There will be no consequences if you stop and you will not be criticized. You will not lose any benefits that you normally receive.

Who should I contact if I have questions?

The people conducting this study will be able to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at phone number 252-480-8888 (days, 8:00 am – 4:00 pm) or email parkerke@daretolearn.org.

If you have questions about your rights as someone taking part in research, you may call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2941 (days, 8:00 am – 5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of the ORIC at 252-744-1971.

I have decided I want to take part in this research. What should I do now?

The person obtaining informed consent will ask you to read the following and if you agree, you should sign this form:

- I have read (or had read to me) all of the above information.
- I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.
- I know that I can stop taking part in this study at any time.
- If I wish to not participate in this study, I should leave when reading this statement.
- I have been given a copy of this consent document, and it is mine to keep.

Participant's Name (PRINT)

Signature

Date

Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above and answered all of the person's questions about the research.

Person Obtaining Consent (PRINT)

Signature

Date

APPENDIX E: POST-SORT FOCUS GROUP INTERVIEW CONSENT FORM

Informed Consent to Participate in Research Information to Consider Before Taking Part in Research That Has No More Than Minimal Risk

Title of Research Study: AN ANALYSIS OF THE PERCEPTIONS OF PARENTS AND EDUCATORS ON DARE COUNTY SCHOOLS' SPANISH DUAL LANGUAGE IMMERSION PROGRAM

Principal Investigator: Keith Parker, under the guidance of Dr. Matthew Militello

Researchers at East Carolina University (ECU) study issues related tot society, health problems, environmental problems, behavior problems and the human condition. To do this, we need the help of volunteers who are willing to take part in research.

Why am I being invited to take part in this research?

The purpose of this study is to seek to understand the perceptions of parents and educators in Dare County, North Carolina in regard to the possibility of the public school system implementing a Spanish Dual Language Program. As a parent or educator, you are being invited to take part in this research to share your perceptions, viewpoints, and insights about the potential benefits of dual language immersion. You are being asked to take part in the study by participating in a Card Sort Exercise. Your participation in this study is voluntary. The decision to take part in the research is yours to make. You have the right to participate, to choose not to participate or to stop participating at any time without penalty. By conducting this research, we hope to obtain findings to the following research questions:

1. What are the essential elements of a dual language immersion program?
2. What are the perceptions of dual language programs by parents and educators in Dare County?
3. Why do these parents and educators hold these viewpoints?

If you volunteer to participate in this research, you will be one of about 40 people to do so.

Are there reasons I should not take part in this research?

There are no known reasons for why you should not participate in this research study. In addition, there are no known risks to participating in the post-sort interview.

What other choices do I have if I do not take part in this research?

You can choose not to participate.

Where is the research going to take place and how long will it last?

The research will be conducted at the Dare County Board of Education Conference Room in Nags Head, NC. The total amount of time you will be asked to volunteer for this study is approximately one hour.

What will I be asked to do?

If you agree to participate in this stage of the study, you will be asked to participate in an interview as a follow-up activity to the previous card sorting exercise. Interview questions will focus on the findings of the Q-sort and will be used to seek a deeper understanding of your viewpoints and perceptions about the factors that emerged during the sort and its analysis. Reflection questions will be asked to gain understanding of the rank value you assigned certain factors in the rank order. The interview will be recorded and the recording will be transcribed as part of the data analysis of the study.

What might I experience if I take part in the research?

We do not know of any risks (the chance of harm) associated with this research. Any risks that may occur with this research are no more than what you would experience in everyday life. We do not know if you will benefit from taking part in this study. There may not be any personal benefit to you but the information gained by doing this research may help others in the future.

Will I be paid for taking part in this research?

We will not be able to pay you for the time you volunteer while being in this study.

Will it cost me to take part in this research?

It will not cost you any money to be part of the research.

Who will know that I took part in this research and learn personal information about me?

ECU and the people and organizations listed below may know that you took part in this research and may see information about you that is normally kept private. With your permission, these people may use your private information to do this research:

- Any agency of the federal, state, or local government that regulates human research. This includes the Department of Health and Human Services (DHHS), the North Carolina Department of Health, and the Office for Human Research Protections.
- The University & Medical Center Institutional Review Board (UNCIRB) and its staff have responsibility for overseeing your welfare during this research and may need to see research records that identify you.

How will you keep the information you collect about me secure? How long will you keep it?

The information in the study will be kept confidential to the full extent allowed by law. Confidentiality will be maintained throughout the data collection and data analysis process. Information gathered from the interview will be maintained in a secure, locked location and will be destroyed upon successful completion of the study. No reference will be made in oral or written reports that could link you to the study.

What if I decide I do not want to continue in this research?

You can stop at any time after it has already started. There will be no consequences if you stop and you will not be criticized. You will not lose any benefits that you normally receive.

Who should I contact if I have questions?

The people conducting this study will be able to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at phone number 252-480-8888 (days, 8:00 am – 4:00 pm) or email parkerke@daretolearn.org.

If you have questions about your rights as someone taking part in research, you may call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2941 (days, 8:00 am – 5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of the ORIC at 252-744-1971.

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- If I wish to not participate in this study, I should leave when reading this statement.
- I have been given a copy of this consent document, and it is mine to keep.

Participant's Name (PRINT)	Signature	Date
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Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above and answered all of the person's questions about the research.

Person Obtaining Consent (PRINT)	Signature	Date
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